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Industrial Feasibility Studies

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PRODUCTION OF SPARKLING WINE IN ROMANIA

ROM/044/M/94 - 03

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maps

FEASIBILITY STUDY

OF AN INDUSTRIAL PROJECT FOR

PRODUCTION OF SPARKLING WINE

IN ROMANIA

ROM/044/M/94-03

AUGUST 1996

UNIDO

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IN ROMANIA

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This Feasibility Study was carried out, on behalf of UNIDO,
by a Project Team whose components were:

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AUGUST 1996

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1.1 Project Idea

The JV will be named VINVALDO. The aim of the project is the setting up of a sparkling wine production plant in Costanta, utilising local raw materials and manpower in combination to Italian management, technology and industrial know-how.

1.2 Project background

During the visit in Romania held in March 1994, to organise the participation of a Romanian delegation to BORITEC '94, the UNIDO-IPO Milan identified the local proposal of setting up a Joint Venture company for producing Sparkling Wines (SW) in Costanta, Romania.

After the promotion of the proposal among the Italian industrial community, the Valdo Spumanti S.p.A., an Italian sparkling wines company, was identified as a potential foreign partner in the JV.

The Italian investor is a national leader in the sparkling wine production using the industrial Charmat method. The total production per year is around 5 million bottles, of which the 5% is exported in Europe and in the USA. Valdiso has a centenary experience on production and marketing of wines and sparkling wines and could promote a well known Italian brand in new markets in Eastern Europe.

The Romanian partner, VINVICO s.a., is a former State-owned company operating in the industrial wine production line. It do not own any vineyards and produce large quantities of wines and alcoholic beverages in the framework of a co-operative system. The company is now facing the steadily privatisation of the economy and is moving toward a free market and democratic political system.

Few economic reforms have been undertaken in Romania compared with other former communist Eastern European states. While all the countries suffered from recession in the reform process, Romania experienced the most severe, and there appears to be little prospect of improvement in the near future.

Only a small minority is doing well economically. Real wages have also fallen since the change of regime, and are continuing to do so. Farming began to

be privatised in 1989 and by 1994 about 80% of farmland was in private hands. It remains poorly mechanised. Agricultural processing is still under state control, and output levels have fallen, notably in meat products.

1.3 Market Analysis

As expected, Romania is a country where access to statistics and to tight information is sometimes difficult or impossible at all. The study utilised any available and relevant information. Information missing from official statistics have been estimated by means of direct researches and interviews. Often different sources are not compatible or not comparable, so that some assumptions are subject to uncertainty. That is a common problem in Eastern Europe countries, and particularly evident in Romania where the Western concept of marketing is nearly unknown.

Presently, the Romanian population is around 22 millions people and it has not changed much in the last 10 years. Traditionally, people attitude is positive towards grape growing, wine making and consuming.

Wine consumption is very widespread but it is nowadays clear that some elements of the past wine culture were lost in the last twenty or thirty years. The production of wine decreased steadily from an average of 8.7 millions Hliters per year (1 Hliter equals to 100 litres) in 1981-85 to an average of 7.5 millions in 1986-90 and to 4.4 millions in 1991, after a long general and agricultural crisis.

Today, Romanian economy faces a deep lowering of GNP/capita and a lowering of families' purchasing power. After the 1989 revolution, in the 1990-93 period, the income per capita decreased from 1,844 USD to 942 USD. Accordingly, consumption of very cheap spirits has gone up, replacing market shares of more traditional beverages such as wine or beer. Considering a spot example, beer consumption passed from 59 to 51 Lt per capita/year in the 1990-93 period. Other similar data on wine consumption are not reliable.

Also the well named and traditional industry of sparkling wine faces a tremendous crisis and the official statistics of a total production of 20 million bottles per year are not realistic. Such a figure can only be considered as the past reference size of the local sparkling wine market and the basis for the evaluation of the potential market.

Presently, in wine production and marketing there are very few legal constraints and the general framework is uncertain. The quality of wines is not protected by a sure legal support and its appreciation depends mostly on the market positioning of the producer.

A new law on the acceleration of privatisation is in discussion in the Parliament. A new law on viticulture and wine production is in discussion too.

Considering the data provided by companies as more reliable than the official data, we can assume an estimated total production of 10 millions bottles per year coming from the main producers.

The main companies producing sparkling wines, and using the Champenoise method (fermentation in bottle) are:

- Jidvei, Silvania, Panciu, Zarea

Additional companies use the Charmat method (bulk sparkling wine):

- Cotnari (Bucium), Valea Calugareasca

	1994		
in bottles	export	domestic	TOTAL
Panciu	22.000	506.000	528.000
Zarea	890.000	3.890.000	4.780.000
Silvania	153.000	807.000	960.000
Bucium	0	1.950.000	1.950.000
Jidvei	28.000	2.282.000	2.310.000
Valea	n.a.	n.a.	-
TOTAL	1.093.000		10.528.000
export%	10,4		

As made evident by the figures, even in presence of a very critical economic condition, the overall production increased along the years 92-94, while the export share fluctuated.

(in bottles)	1992	1993	1994
Total	6.795.000	6.983.000	10.528.000
Export %	9,1	15,5	10,4

Production of carbonated wine (not directly competing with VINVALDO JV's products) called "spumoso" and sold at a very low price (under the commercial brand of Afrodita) is also allowed (the carbonated wine is not allowed in Italy).

Most of the produced sparkling wines are sweet or semi-sweet types. Jidvei is apparently the only Romanian company producing the dry (brut) sparkling wine recognised by the local consumers as the quality one.

In order to evaluate price level on the market, ex-winery prices declared by local competitors are herein listed:

	export ex-winery price	domestic	(table in LEI/bottle)
Panciu	3.166		Brut, plastic cork
	2.985		Brut, real cork
		4,189	Brut, true cork
	2,518		Demi-sec, plastic cork
	2,830		Demi-sec, true-cork
		4,032	Demi-sec, true-cork
Zarea	3.440	n.a.	Sec and Demi-sec
Silvania	2.525	n.a.	
Bucium	-	n.a.	
Jidvei	3.068	4.047	Sec, Demi-sec, Nature, Rosè

As far as the brand name and customer appreciation, the following table summarises the results of the customer survey analysis (see paragraph 3.1.4 Customer Survey).

quality level	local brand	imported brand
EXCELLENT		Schloss Friedberg (D) Moet&Chandon (F)
GOOD	Jidvei	Gran Moscato (I) Angelli Imperial (I) Nynphenburg(D)
FAIRLY GOOD	Panciu Zarea	
AVERAGE	Bucium Silvania	

As a general remark, the foreign price level is 30% higher than the local one, and only the best quality and brut types are exported.

Some sparkling wines are imported from foreign countries on the local market. French Champagne is sold in extremely limited quantities and is extremely expensive with respect to people purchasing power. German Sekt is distributed in many areas, preferably in urban and tourist districts. Italian Spumante can also be found, in more limited quantities than German Sekt. It is possible to find a few sparkling wines from Bulgaria, especially near Costanta in the Black Sea coastal area (information from direct observations in Bucharest, in Costanta and in each of the visited towns).

Summarising the main relevant issues coming out from the customer survey, we may underline:

1. People's attitude towards sparkling wine is positive, with normal consumption along the whole year (no seasonality)
2. A preference is shown towards sweet and demi-sec wines, while "brut" wines are appreciated as the most expensive (and quality oriented). Unfortunately, a market segmentation of sweet towards brut sparkling wines was not possible. It is supposed that three-fourth of the total quantity involves sweet and related products, but a lower share of total sales.
3. The price premium for the imported wines is high with respect to the domestic ones (double the price is accepted). Foreign brand names can give additional price premium even if connected to local production.
4. The unit of sales is infrequently higher than a couple of bottles, therefore any six-bottle box would not find any acceptance on the market

In the past, economic system wineries sold exclusively to Public Organisations, planning the needs of end-users. All the wineries being now present in the market are facing great changes in relations both to buyers and suppliers.

In the past centralised economy, each production unit had generally market relations with few buyers and suppliers. A big company, such as VINVICO itself, before the revolution supplied only few clients. Now the same winery could sell to at least 600 clients trying to extend this number to increase profits, and could establish direct contacts with the retailers.

Until now, the distribution system consists of Retailers, Wholesalers, En Gross sellers, Professional Wholesalers, Wineries. Wineries are free to sell to any step of the system. As observed, there is no price differentiation between direct and indirect selling.

The cost structure is made up by several intermediate passages through the distributing channels. The most common structure, as well as the structure which is envisaged to stabilise at the end of the present turbulent evolution, is described hereinafter.

- At the beginning, the winery cost (see the ex-winery prices considered in the first tables reporting about the references for the different producers) is increased by the excise duty (115% on sparkling wine), than the total cost is further charged by the Added Value Tax (VAT). The total cost for the wholesaler is therefore 2.15 times the ex-winery price, plus 18% VAT

- The normal mark-up of the wholesaler is about 10%-15%. Therefore, the total wholesaler to retailer price is 2.365 times the ex-winery (considering 10% mark-up), plus VAT 18%

- Again, the average mark-up of the retailer is about 25%-30%. Therefore, the total customer price is about 3.07 times the ex-winery, plus 18% VAT.

If ex-winery price for Vinvaldo were 2,500 LEI/bottle, the wholesaler would buy at LEI 6,976 (included VAT), and adding its 10% margin, it would sell to the retailer at 7,712; adding an additional retailer margin of 25 % and deducing the VAT rate, the custom price would be set at 8,720 LEI/bottle.

Russia, Hungary, Poland, Czech Republic are the greatest importers of sparkling wine from E.U. The total population of the local and "near local" market (Romania itself, then Poland, Czech Republic, Hungary) sums up to about 81 million people. Including other countries as potential markets, such as, Bielorussia, Bulgaria, Estonia, Lithuania, Slovak and Turkey, the total target population sums up to other near 90 million people. Russia itself has a population of 148.2 million people. All these people were used and are used to consume sparkling wine.

The estimate of the imported (in those countries from the E.U.) sparkling wine market as the reference one for the JV's products access can be considered consistent .

For the sake of a sound and prudent forecast, let's start considering the aggregate market for 1993 only out of those countries with strong similarities (with Romania in terms of economics); therefore considering only the following (data from 1993 sequences):

Country	Tot Import Hl (1993)	'000 ECU	average cost ECU / Lt	conversion LEI / bottle
Poland	9,879	1,424	1.44	2,700
Hungary	4,309	699	1.62	3,037
Russia	350,749	40,253	1.14	2,137
Ukraine	8,448	1,074	1.66	3,112
Bielorussia	8,816	901	1.02	1,912
Bulgaria	364	52	1.42	2,662
TOTAL/AVERAGE	**382,565**	**44,403**	**1.28**	**2,400**

Considering an average of 0.7-0.75 Lt/bottle, the total amount corresponds to about 50-54 Millions of bottles, which represents the potential market per year. Of course, any improvement in the national GNPs would result in enhanced domestic market size, being the imported sparkling wine considered an indicator of standing more than primary needs.

Acting through the existing distributing channels of VINVICO (i.e. VINEXPORT) or, even better, through the direct channels the Italian partner

has with the whole area (particularly with Russia), it seems a consistent, prudent estimation to target about 1.5% of the total market, given an appropriate selection of the reference price. It should be pointed out that, especially at the beginning, the competition strategy can only (or mainly) be based on price level, while the quality assessment can come along with the brand name appraisal by the consumer market.

As a reference sizing, the assumptions would lead to a total market access of about 800,000 bottles/year at regime.

Considering more carefully the reference country (i.e. Russia), the bottle price -at customs level- is about 2,137 LEI/bottle.

Italian producers declared to export to Russia very large quantities of bottles of a low quality sparkling wine at the price of LEI 1,250. The cost of transport is estimated in LEI 620 per bottle. Comparing these data with the production costs calculated for the Vinvaldo JV, it is supposed that a pure price competition is hardly possible in lower-end of the market: which is in line with the project goal of accessing the quality segment of the market. As an additional consideration, it should be pointed out that if a large volume of imports is represented by cheap bottles, the average price of the remaining should be much higher, giving additional margin to the JV competitiveness, at a given a reference price.

Summarising what derived from the **local market** assessment, it should be underlined that the total market is estimated at about 10,000,000 bottle/year, even though an appropriate segmentation should be considered to split the sweet and demi-sec from the brut.
An access to market of about **200,000 bottle/year** can be considered a prudent share of the market (**2.0%** of the total, or about 3.5% on brut only), and therefore a consistent target for the company.

An important issue derives from the possibility of direct access of the JV to the retailers' level, thus reducing the mark-up charging sequence, and resulting in a larger direct margin (or lower end-user price). Such a selling structure (presently missing) should be organised by the company to take the opportunity.

As far as the **international market** is concerned, and operating over the overall estimated accessible market of 50 Millions of bottle/year (selling through the existing distributing channels of VINEXPORT or through the direct channels the Italian partner has with the whole area and particularly with Russia), it seems a consistent, prudent estimation to target **about 1.5%** of the total market, given an appropriate selection of the reference price. Once again, it should be pointed out that, especially at the beginning, the competition strategy can only (or mainly) be based on price level, while the

quality assessment can come along with the brand name appraisal by the consumer market.

As a reference sizing, the assumptions would lead to a total international market access of about **800,000 bottles/year** at regime.

Because of the impossibility of reducing industrial costs over a certain extent, the policy of competing with both price and quality implies not to challenge very competitive market shares, as for example the lower level of consumers targeted by sparkling wine (normally sweet ones) such as the above mentioned "Dacia", which sells in local market at 3,000-3,500 LEI/bottle (retailer price).

If Vinvaldo JV sells a "high quality" product at **2,500 LEI/bottle** at winery price the retail price will be around 8,700-9,000 LEI.

In this case, in the local retail market, the product will be competitive against Nymphenburg, Ciociosan, Cristallo Spumante Capetta, Schloss Friedberg, Cuvée Imperiale Angelli sold at a retail prices between 4,500 and 10,000 LEI, because of the appealing mix of quality and price, together with the Italian brand image. Furthermore, the product could be competitive as substituting imported wines (which sell in the range of 20,000 LEI per bottle).

Considering to deduct the transport costs (estimated up to 620 LEI/bottle from Italy to the reference market of Russia: however a lower amount should be taken into consideration from Romania to Russia; therefore about 530-540 LEI/bottle was considered), the average reference price to Russia could be stated at the lowest level of about **1,600 LEI/bottle**.

From the marketing concept standpoint, the final products of Vinvaldo JV should offer (domestic market):

- good enological qualities (Champenoise method, brut type)
- appealing Italian style
- price positioning cheaper than the highest imported qualities, in the range of the good national products

On the international market, the final products of the Vinvaldo JV should offer:

- good enological qualities (Champenoise method, brut type)
- appealing Italian style
- cheapest price positioning with respect to same-level products

In any case, the price competition is still the key issue of the project strategy: the price level for both the domestic market and the international

market have been selected according to the principle of being cheaper (or at least as cheap as) than the competitors.

Furthermore, if direct sales to the retail level (especially on the local market) are successfully expanded, the JV company will get the additional benefit of a larger margin to the same end-user price. However, to give to the study a sound perspective, for the time being no direct channel to retailers has been considered.

An additional support for the JV company should come from the progressive improvement of the brand image, resulting (especially abroad) in a less stringent competition on the price level. The marketing attitude must contain a special care in the labelling design of bottles and packaging to achieve a correct presentation to end-users. The targeted consumers are tourists and, local population belonging to the higher classes. To promote the image of high quality, the links with a renowned Italian producer need to be emphasised, for instance by joining an Italian brand to a local well-known product name (name of a special area famous for certain production, or name of a location specific for the production, such as a villa, an ancient ruin or others), or simply by a suggestive name as "VIVALDI SPARKLING WINE", symbolically recalling both Vinvico and Valdiso Companies as well as a very famous Italian musician name.

The most correct positioning of the product seems to be entitled to "an Italian product made in Romania - manufactured under Italian enologists' control".

The new company will be able to distribute its products directly or trough controlled distributors or to become a shareholder of Vinexport. In any case, it seems crucial for the JV to set up an independent distributing channel, even though the initial step into the market can be obtained by Vinexport.

1.4 Raw materials and supplies

To produce 1 unit of output (1 bottle of sparkling wine 0.75 Lt) with losses included, the following amount of raw materials is required:

n.	Raw Material list	unit	q.ty
1	Sparkling wine base	Hl	0.0075
2	Sugar	Kg	0.0338
3	Selected yeast (Auxiliary materials)	gr	0.023
4	Bottle ml. 750 gr. 880	n.	1.02
5	Plastic "mushroom"- cork	n.	1.02
6	Metallic cage for bottles	n.	1.02
7	Tinfoil capsule	n.	1.02
8	Label + collar	n.	1.02
9	Cardboard box for 12 bottles + hive	n.	0.085

The availability of each item in the local or the foreign market is the following:

1. Sparkling wine base	local (by Vinvico)
2. Sugar	local
3. Selected yeast	local
4. Bottle ml. 750 gr. 880	imported
5. Plastic cork	imported
6. Metallic cage for bottles	imported
7. Tinfoil capsule	imported
8. Label + collar	imported
9. Cardboard box for 12 bottles + hive	imported
10. Electricity and thermal energy	local
11. Water	local
12. Nitrogen	local

Vinvico s.a. will provide to the Vinvaldo JV the sparkling base-wine obtained with good quality grapes, clarified, stabilised and filtrated, quoting 545 LEI/lt for the processed base-wines.

In the local market it is possible to purchase sugar and yeast:

1. Sparkling wine base	LEI/lt	545
2. Sugar	LEI/Kg	1.000
3. Selected yeast	LEI/Kg	80.000

The costs of auxiliary materials (imported from Italy) are as follows:

1. bottle ml. 750 gr. 880	LEI 300
2. plastic mushroom-cork	LEI 50
3. metallic cage for bottles	LEI 50
4. tinfoil capsule	LEI 60
5. label + collar	LEI 20
6. cardboard box for 12 bottles + hive:	LEI 1.500

Raw Materials include filters, glue, chemicals, etc.: a global cost of 30 LEI/bottle is forecast.

The energy costs is globally (reference to a 1,000,000 bottle/year production capacity) determined as follows:

Item	Unit Price	Consumption (total capacity)
electricity	110 LEI/Kwh	120,000
energy	0.025 LEI/Kcal	110,000
water	104 LEI/mc	2,000
nitrogen	500 LEI/lt	25,000

A global cost of 30 LEI/bottle is forecast.

In the cost of maintenance are included the machinery maintenance and the respective spare parts. The forecast cost is LEI 10/bottle.

1.5 Location, site and environment

Romania lies in South Eastern Europe, in the northern part of the Balkan Peninsula. Costanta is one of the main cities with around 200.000 inhabitants.

The namesake District (near 450.000 inhabitants) lies on the sea coast of the Black Sea between the border on Russia to the North and Bulgaria to the South for about 250 Km.

The Costanta District is bordered on the Danube River to the North and to the West, on the Black Sea to the East and to the South on the Bulgarian border.

Besides the Moldavia and the Transilvania Regions also the Black Sea coastal strip (District of Costanta) is well known for the production of wines: Feteasca Regala and Feteasca Alba in particular. Traditionally was an exporter producer of sparkling "Champenoise" wines towards Russia and other Eastern Countries.

The Black Sea Coastal strip has its own special environment, including a temperate climate with continental aspects.

The average annual rainfall is lower than in other regions and it is only about 450 mm. The average temperature in January is - 2 °C, while in the Summer is about 20 °C.

The general climate conditions are similar to a sub-Mediterranean area with non particular difficulties or extreme conditions.

The environmental impact of the Project is compatible with the present standard of environment.

1989 is a topical year in the history of Romania. The revolution stopped a 40-year centralised economic system. After 1990, the Government faced a general weak condition, characterised by fragility both in political and economic conditions. Finally, in 1993 some economic indicators began to grow up. The industrial production and the agricultural sector guided the starting of the restoration of the economy. The positive trend is due to the introduction of incentives for foreign investors and to the liberalisation of the private initiative in all the sectors of the economy.

In Romania, the following main issues are relevant to foreign investments:

- the private enterprise is fully recognised by law
- the production and distribution sectors are not characterised by well organised competition, thus leaving huge free market space to potential foreign competitors
- working people are largely educated, and can adapt easily to any employment
- labour cost is still much lower than in the European Union
- resources are largely available in the agro-industry field

The Project will take advantages from the location in the Costanta District and in particular in the Vinvico plant. As a matter of fact, Costanta is the most important port of Romania, being the most important base for shipping agricultural and industrial goods (such as cereals and petroleum) through the Black Sea and the Danube River to all the neighbouring Countries.

Human resources could be the critical point of the project. Skilled and semi-skilled workers are even more than available. This abundance might produce social conflicts in the next future due to different wages, or even different working conditions, between Vinvaldo (Italy) and Vinvico (local JV employees) workers.

A second critical point is related to the local management quality and efficiency. Some of the local managers do not always agree with the general strategy of the project. For this reason, it is strictly mandatory that an Italian manager follow the whole project implementation in order to control any step of the processing and marketing system and not only during the plant construction or the workers' training.

In order to evaluate the cost of investment related to buildings, some uncertainty is linked to officially registered data and to the lack of any formal registered contract.

Furthermore it is impossible to appraise the market price of the building due to the absolute lack of purchase power examples or renting of similar buildings. Therefore, the present estimation is calculated according to the cost of the restoration, evaluated by 150.000.000 LEI.

1.6 Engineering and technology

Vinvico makes wine from 300.000 ql (1 ql = 100 Kg) of grapes per year, in 12 owned centres (cellars) of production, located in the District of Constanta in a range of less than 80 Km.

Vinvico buys only the grapes to cover its needs, while the remaining of the agricultural production exceeding the marketing capacity of Vinvico s.a., which is about the half of the total production, is self-made and stored on behalf of a third party.

The actual availability of grapes is therefore 150.000 ql per year, but it is not all suitable for the production of sparkling wine. As a matter of fact, the technique of cultivation of vineyards is rather approximate; for instance in Tariverde farm, after pruning, in each hectare remains a very large number of buds (180.000-200.000).

Irrigation is not available and the soundness of grapes is precarious and discontinuous. Therefore, it will be necessary to select the best quality grapes.

The actual and potential productivity of the analysed farms is sufficient to produce the necessary base sparkling wine for the total production of 1.000.000 bottles forecast in the Vinvaldo JV beginning from the first year of production.

Following the organoleptic tests conducted by the Italian technologist during the field survey, all varieties of grapes produced in the 3 selected farms, can enter in the cut to obtain the sparkling wine base. The existing wine-making equipment are rather precarious and obsolete, they allow the wines production only by drawing the wine off, with a yield of 50-60%.

The cooling plants are not running or they had never run and they are probably not recoverable. Furthermore, the more elementary sanitary and cleaning regulations of the wine pots are lacking.

Today all wines have the common defect of a really high volatile acidity (from 0,50 to 0,70 gr./lt) that confirms the above mentioned precarious soundness of grapes and wine-making technique, so that unhealthy pots sometimes compromise the wine quality.

The quality potential is good, but investments on equipment and personnel for wine-making are necessary to guarantee the required quality standard.

The Vinvaldo JV will produce a sparkling wine that will be included in the category called "Vino Spumante Demi-sec" by the regulation STP 109/92 of the Romanian Agricultural Ministry. It is a sparkling wine obtained by a natural fermentation in pressurised vats, with a minimum degree of 11% vol., sugar from 15 to 40 gr./lt and minimum pressure of 4 bar.

The complete cycle lasts 30 days in pressurised vats, of which 25 for the sparkling process and 5 for the bottling of the semi-finished product. Then a second phase of labelling and packaging follows, which lasts 7 working days, necessary for the drying of the bottles.

The technology choice is based on the previous centenary experience of Valdo management in Charmat method of sparkling wine producing. Roughly, it consists in the processing of base sparkling wines in stainless pressurised vats of about 450-500 Hl by adding yeast and controlling the temperature of fermentation by cooling system.

The project forecasts a starting production of 1 million bottles per year, so that the engineering project is based on this data.

The technology will be moved from Italy. The method of sparkling is the Charmat method available buying Italian machinery and using Italian industrial know-how. The know-how is provided by Valdo industries management and

the machinery will be bought as shown in annexed offers of Italian producers.

The processing layout to produce sparkling wine in the Vinvaldo JV includes the Sparkling, the Bottling, the Labelling and Packaging phases:

The following machinery has been selected in order to produce the forecast production:

1) Production line (Sparkling process)

- 2 pressurised vats of 450 hl each
- 2 thermal covering for the above mentioned vats
- 1 cooling station with pumps and glycol-tank
- 1 second-hand centrifuge Alfa Laval
- 1 filter Master 40x40
- 1 electric fuel pump
- transport, assembling, electric and
- hydraulic connections costs

2) Bottling line

- 1 second-hand rinsing equipment
- 1 filling equipment
- 1 corking equipment
- 1 equipment for application of metallic cages on the bottles
- 1 capsule equipment
- 1 labelling equipment
- 1 box forming equipment
- 1 boxing equipment
- 1 closing box equipment
- transporting belts
- electric panel
- micro filtering system
- transport, assembling, electric and
- hydraulic connections costs

The entire set of machinery will be provided and installed by the Italian supply industries

Part of the building available from Vinvico has been identified for the implementation of the project. The building is located in the Vinvinco cellar in Constanta. Indoor space available for the bottling and storage is 1.000 square metres, with possibility of enlarging for further 200 mq. Outdoor

space which should be used for the pressurised vats is of 200 mq. The building is 5 m high and does not allow the allocation of the vats. Presently the building is not being used and a complete restoration, to satisfy the needs of Vinvaldo production, is necessary.

The total amount of money needed to purchase all equipment necessary for the production is LEI 1,187,500,000. This investment is shared as follows:

SPARKLING PROCESS	unit cost (LEI)
2 pressurised vats of 450 hl each	140,075,000
2 thermal covering for the above mentioned vats	24,500,000
1 cooling station with pumps and glycol-tank	103,506,250
1 second-hand centrifuge Alfa Laval	31,250,000
1 filter Master 40x40	23,050,000
1 electric fuel pump	5,675,000
transport, assembling, electric and hydraulic connections costs	62,500,000
TOTAL	390,056,250

PRODUCTION	unit cost (LEI)
1 second-hand rinsing equipment	50,000,000
1 filling equipment	100,000,000
1 corking equipment	22,500,000
1 equipment for application of metallic cages on the bottles	25,000,000
1 capsule equipment	25,000,000
1 labelling equipment	31,250,000
1 box forming equipment	25,000,000
1 boxing equipment	18,750,000
1 closing box equipment	15,000,000
transporting belts	125,000,000
electric panel	31,250,000
micro filtering system	12.500.000
transport, assembling, electric and hydraulic connections costs	125,000,000
TOTAL	606,250,000

VARIOUS EQUIPMENT	unit cost (LEI)
Full bottles containers	15,437,500
Fork-lift trucks	85,000,000
Air compressor	6,250,000
TOTAL	106,687,500

CONTINGENCIES	unit cost (LEI)
Unforeseen events 7%	83,750,000

To reduce the total amount of the investment as much as possible, the purchase of second-hand revamped equipment has been considered to the maximum extent possible.

The second hand selection slightly delays the time schedule for the completion of the plant, estimated in about 9 months from the date of purchase orders.

1.7 Organisation and Overhead

The industrial enterprise Vinvico JV will be organised according to the following divisions:

A. General Management (Project and Enterprise decisions)
B. Administration (Accounting and Personnel)
C. Production (Sparkling, Quality, Maintenance, Bottling)
D. Supplies (Labelling, Packaging and Storage)
E. Marketing (Provided by the G.M.)

1.8 Human resources

The human resources required in the Vinvaldo JV for the implementation and operation of the project can be identified in the following categories:

n.1 Manager
n.2 Administrative clerks
n.1 Person in charge of technical aspects (technical manager)
n.1 Skilled mechanic
n.1 Skilled storeman
n.2 Skilled workers with forklift trucks
n.1 Skilled worker for pressurised vats managing.
n.3 Skilled workers for production line
n.4 Unskilled workers for production line

The Vinvaldo JV total employment will result in 16 persons.

It should be emphasised that the success of the project is highly linked to the quality of the management.

Along the study, it has been clearly understood that the local management experience is far lower than the Italian average standard. Therefore the employment of an Italian General Manager, to reinforce the critical issue of the company's ruling activities, is strictly recommended.

The choice of people to be employed in the Vinvaldo JV is subject to the critical selection of the appropriated (and motivated) personnel among the over 350 units presently working in Vinvico.

The new firm will utilise only 16 of them. The personnel will be selected among those already trained in working in cellar and bottling.

The person in charge of technical issues (enologist) will need a special training of 2-3 months about sparkling wine produced in western countries, especially at the Valdo plant in Italy.

The following table reports about the salary related costs. Costs are inclusive of 30% social charges and 25% taxes. The working days are 252 per year.

Categories	cost (LEI) /day
workman	14,300
skilled workman	22,000
clerk	27,500
manager	49,500

1.9 Implementation Planning and Budgeting

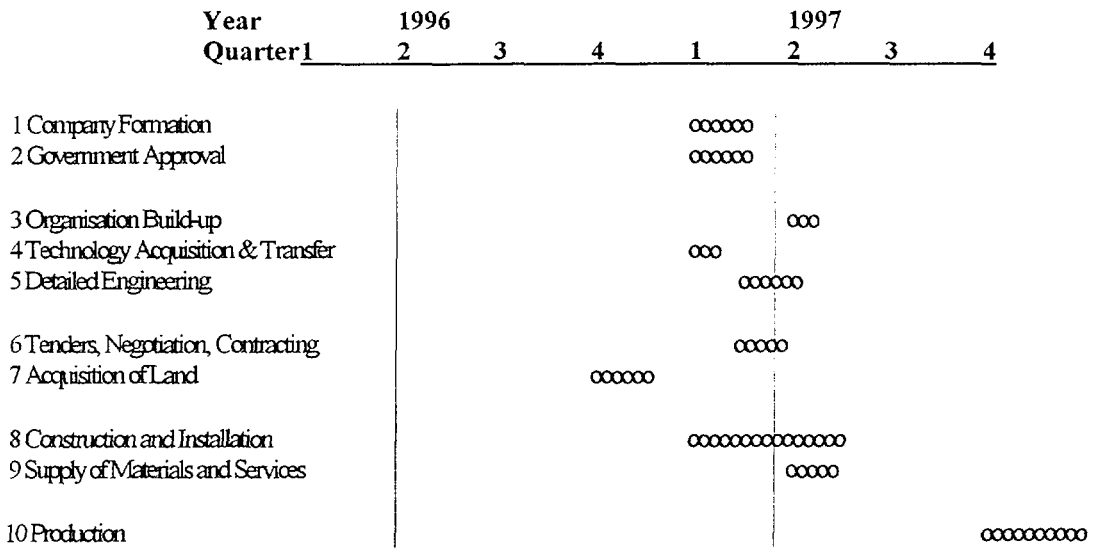
The whole implementation process has been divided into three phases:

1) Pre-investment phase

2) Investment phase

3) Operational phase.

Implementation Planning Schedule



It has been prudentially forecast that, during the 1996, it will be necessary 1/2 year pre-production period, during which all the necessary accomplishment for the constitution of the JV will be done.

During 1996, the restoration of the building has been prudentially forecast to end before Summer in order to allow the actual beginning of the production in June/July.

It is very important to underline that the initial JV agreement is likely subject to a misunderstanding, maybe due to the difference in the interpretation (or translation) of the signed Letter Of Intent.

As a matter of fact, according to the LOI, the Romanian partner should provide the buildings, part of the machinery, labour, the raw materials, the management and administration facilities.

During the study team mission to Romania, the VINVICO President. Mr.Cojucaru announced that it is impossible for VINVICO to provide any part

of the machinery. Especially, no use of the VINVICO bottling line for the production of the JV company is considered possible for different reasons.

The Feasibility Study Team in Romania clearly realised the absolute lack of liquidity of VINVICO company: as a result, VINVICO could contribute to the capitalisation of the VINVALDO JV only with the capital value of the buildings.

Therefore a realistic revision of the preliminary agreement should be considered carefully by the parties, in order to define a concrete financial structure of the possible Joint Venture.

In the meantime, the present study is based on the initial agreement, and therefore the capital coverage is assumed in line with the Letter Of Intent.

1.10 Financial analysis and investment appraisal

The financial evaluation has been carried out assuming a basic reference configuration for the investment project, defined by the cost estimation summarised in the previous paragraphs. This base case involves real costs and prices, with inflation not incorporated. The related printouts are enclosed in the Annex 1. The main considerations that can be pinpointed are the following:

i) Given the general assumptions of the project, the Net Present Value (NPV), calculated at 18% the discount rate, is positive (305,900 LEI), thus indicating that the industrial project provides a remuneration higher than required discount rate. The internal rate of return is 24.4%, which is 6.4 points higher than the hurdle rate of 18%.

iii) The Net Profit starts to show positive results from the first year of production (1997) with Net Profit stabilising at around 8% of sales. Net Profit reaches just over 135,830 LEI by the year 2000.

iv) The break-even point (about 68% of total capacity) shows a certsin limited flexibility of the project to unforeseen fluctuations of the revenues.

v) The sensitivity analysis shows a certain degree of strengthen of the project against fluctuations of foreign sales and investment capital expenditures, still maintaining a positive NPV. On the contrary, the project is highly sensitive to variations of price (less than 10% decrease) and production costs (less than 10% increase).

Chapter 2. Project Background and Basic Idea

2.1 Project background

During the visit in Romania held in March 1994, to organise the participation of a Romanian delegation to BORITEC '94, the UNIDO-IPO of Milan identified the local proposal of setting up a Joint Venture company for producing Sparkling Wines (SW) in Costanta, Romania.

After the promotion of the proposal among the Italian industrial community, the Valdo Spumanti S.p.A., an Italian sparkling wines company, was identified as a potential foreign partner in the JV.

After a two days mission in Costanta, the joint-venture agreement was undersigned by the two counterparts on the 11.10.94., and on the 13.10.94 the request for a feasibility study to the IPO-UNIDO by the Italian investor was submitted.

The Italian investor is a national leader in the sparkling wine production using the industrial Charmat method. The total production per year is around 5 million bottles, of which 5% is exported to Europe and the U.S.A. Valdiso has a centenary experience in the production and marketing of wines and sparkling wines and could promote a well known Italian brand in new markets in Eastern Europe.

The Romanian partner, VINVICO s.a., is a former State-owned company operating in the industrial phase of the wine production line. It does not own any vineyards and produces large quantities of wines and alcoholic beverages in the framework of a co-operative system. The company is now facing the steadily privatisation of the economy and is moving towards a free market and democratic political system.

The JV could be named VINVALDO and in this document we will use this name.

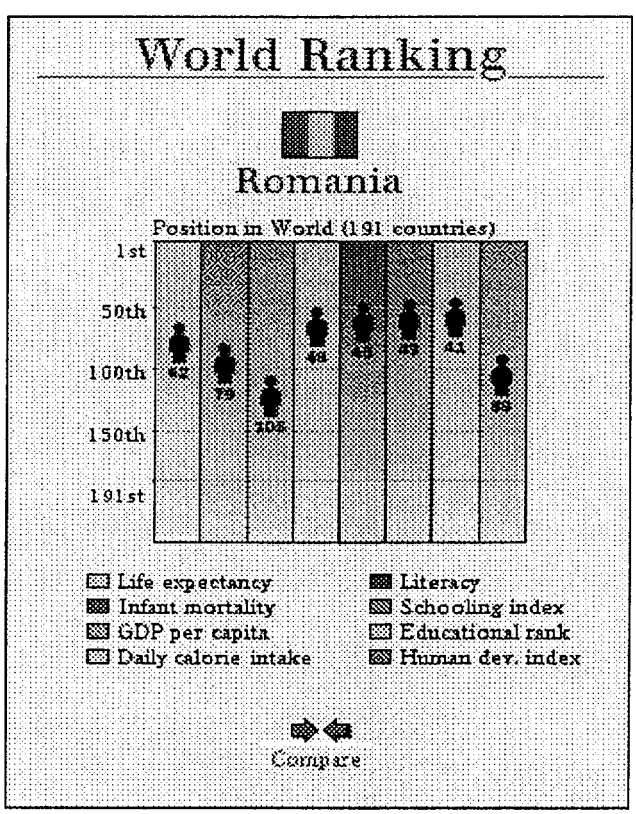
The aim of the project envisages the setting up of a sparkling wine production plant in Costanta, utilising local raw materials and manpower in combination to Italian management, technology and industrial know-how.

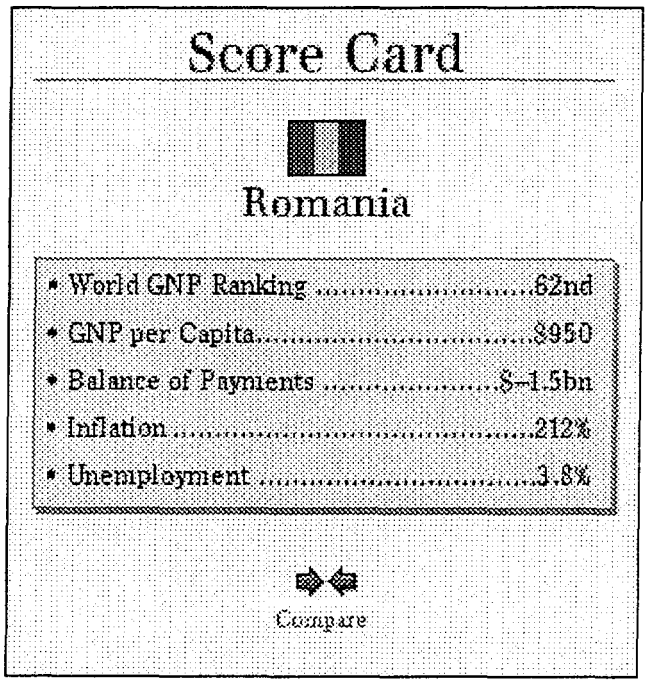
2.2 The country

Few economic reforms have been undertaken in Romania compared with other former communist Eastern European states. While all the countries suffered from recession in the reform process, Romania experienced the most severe, and there appears to be little prospect of improvement in the near future. Pressure for reform is strongest in the chemical, petrochemical, metal, transportation and food industries.

Only a small minority is doing well economically. Real wages have also fallen since the change of regime, and are continuing to do so. Farming began to be privatised in 1989 and by 1994, 80% of farmland was in private hands. It remains poorly mechanised. Agricultural processing is still under state control, and output levels have fallen, notably in meat products.

Romania was the first Eastern European country to open its economy to foreign investment, allowing 100% foreign ownership from 1990. The number of joint ventures – 21,000 – is the highest in Eastern Europe, but most are small-scale. Foreign investment is hindered by bureaucracy and doubts about the country's stability. However, both imports and exports rose in 1993. The E.U. is now Romania's main trading partner.





Chapter 3. Marketing Analysis and Marketing Concept

The JV Vinvaldo involves two companies:

- Valdiso Spumante Co., a large Italian Company in the position to contribute with modern technology, financial capitals, and marketing expertise
- Vinvico, the Romanian partner, providing quality grapes, administrative structure, labour, land and building.

The targets of the JV Vinvaldo are :

- starting a sparkling wine production (in bulk processing) of higher quality than most of the existing products in Romania.
- accessing the local market and the Eastern Europe market

Amongst the important decisions to take in the future JV the first is how to market and distribute the products and whether the Vinvico sales channels should be used.

The 1989 is a turning year in the history of Romania. The revolution stopped a 40-year centralised economic system. After 1990 the Government faced a weak general situation, characterised by fragility both in political and economic conditions. Finally, after 1993, some economic indicators began to grow up. The industrial production and the agricultural sector lead the starting of the economy recovery.

Romanian GNP, after an abrupt decline in 1990-92 (-27%), turned round in 1993 (+1.2%), then it grew strongly in 1994 (+3.4 %) and continued its positive trend in 1995. The most promising developments have been the on-going expansion of exports, an improvement in investment structure and the curbing of the inflation rate. To achieve economic stability the Romanian Government intends to continue its efforts to keep a tight budget, safeguarding the relative LEU (local currency denomination) stability. A faster privatisation, an industrial restructuring and a slower depreciation could bring inflation under 20% at the end of 1996.

Furthermore, the Government is creating a legal framework to promote the restructuring of state-owned companies and their privatisation. Official statistics confirm a healthy picture of economy. Industrial output increased by 10% in comparison to the same period of the previous year. Referring to the same period, FOB exports increased by 26.6 %, while the export share

towards E.U. grew from 39.3 % in 1993 to 45.5 % in 1995 (in total US $ 2,734.9 million).

In the first half of 1995, the main partners of Romania were Germany (17.9 %), Italy (15.4), France (5.3 %), Turkey (4.4 %), UK (3%). FOB imports reached US $ 3,849.9 million, the 37.6 % more than the same period in 1994. Best partners were Germany (17.9 %), Italy (13.8%), Russia (12.3), France (5.7 %), Egypt (3.5 %).

As expected, Romania is a country where access to statistics and to tight information is sometimes difficult or impossible at all. The study utilised any available and relevant information. Information missing from official statistics have been estimated by means of direct researches and interviews. Often different sources are not compatible or not comparable, so that some assumptions are subject to uncertainty. That is a common problem in Eastern Europe countries, and particularly evident in Romania where the Western concept of marketing is nearly unknown.

3.1 Domestic Market Analysis

3.1.1 Assessment of Market Structure: General Remarks

Presently, the Romanian population is around 22 millions people and it has not changed much in the last 10 years. Traditionally, people attitude is positive towards grape growing, wine making and consuming.

As a matter of fact, alcoholic beverages sales rise to 6.8% of total retail sales (Annual Statistic Al Romania 1994), stating an important figure of consumption in people's behaviour. Most of drinking age population is already to some extent used to consume sparkling wine.

Wine consumption is very widespread but it is nowadays clear that some elements of the past wine culture was lost in the last twenty or thirty years. The production of wine decreased steadily from an average of 8.7 millions Hliters per year (1 Hliter equals to 100 litres) in 1981-85 to an average of 7.5 millions in 1986-90 and to 4.4 millions in 1991, after a long general and agricultural crisis.

Accordingly, the wine export to E.U. decreased by 80% in the period 1976-1991, while, on the other hand, the import increased from 12,000 to 170,000 Hliters in the same period (source: Romanian Development Agency).

As well known, the sparkling wine consumption is linked to season or festive and family occasions, and it belongs typically to a medium-high segment of the market.

Today, Romanian economy faces a deep lowering of GNP/capita and a lowering of families' purchasing power. After the 1989 revolution, in the 1990-93 period, the income per capita decreased from 1,844 USD to 942 USD. Accordingly, consumption of very cheap spirits has gone up, replacing market shares of more traditional beverages such as wine or beer. Considering a spot example, beer consumption passed from 59 to 51 Lt per capita/year in the 1990-93 period. Other similar data on wine consumption are not reliable.

Also the well named and traditional industry of sparkling wine faces a tremendous crisis and the official statistics of a total production of 20 million bottles per year are not realistic. Such a figure can only be considered as the past reference size of the local sparkling wine market and the basis for the evaluation of the potential market.

A point could be fixed, saying that the situation of the Romanian grape-growing and wine industry is pretty bleak: imports are rising, while production and exports are dropping. The situation, if possible, is more confused in the sparkling wine sub-sector, since the product is a high quality one and it is targeted to the upper class consumption.

Presently, in wine production and marketing there are very few legal constraints and the general framework is uncertain. The quality of wines is not protected by a sure legal support and its appreciation depends mostly on the market positioning of the producer.

A new law on the acceleration of privatisation is in discussion in the Parliament. A new law on viticulture and wine production is in discussion too.

3.1.2 Local Competition

As mentioned (according to the Ministry of Agriculture information), the local production of sparkling wines is supposed to be around 20 millions bottles.

To carry out a realistic estimate of the actual figure, official data (from Valea Calugareasca Institute) have been compared with those provided by the main sparkling wine producing companies.

Considering the data provided by companies as more reliable than the official data, we can assume an estimated total production of 10 millions bottles per year coming from the main producers.

It is worth mentioning that some vineyards have been planted with hybrids. Such areas increased from 1989 (51,2000 Hectares) to 1993 (86,100 Hectares). Hybrids are easier to grow than viniferous, but they are recognised for the quality of the wines. Hybrids are forbidden in the European Union and exports of wines produced with hybrids grapes to E.U. would be stopped.

The main companies producing sparkling wines, and using the Champenoise method (fermentation in bottle) are:

- Jidvei
- Silvania
- Panciu
- Zarea

Additional companies use the Charmat method (bulk sparkling wine):

- Cotnari (Bucium)
- Valea Calugareasca

Brand products of these wineries are distributed and sold all over Romania, as well as abroad. In the following tables a detailed breakdown of each company's sales is provided, together with domestic/international sales amount.

	1992		
in bottles	**export**	**domestic**	**TOTAL**
Panciu	27.000	1.154.000	**1.181.000**
Zarea	580.000	4.280.000	**4.860.000**
Silvania	n.a.	n.a	-
Bucium	0	465.000	**465.000**
Jidvei	10.000	279.000	**289.000**
Valea	n.a.	n.a.	-
TOTAL	**617.000**		**6.795.000**
export%	**9,1**		

in bottles	1993 export	domestic	TOTAL
Panciu	13.000	622.000	635.000
Zarea	760.000	3.890.000	4.650.000
Silvania	300.000	800.000	1.100.000
Bucium	0	350.000	350.000
Jidvei	12.000	216.000	228.000
Valea	0	20.000	20.000
TOTAL	1.085.000		6.983.000
export%	15,5		

in bottles	1994 export	domestic	TOTAL
Panciu	22.000	506.000	528.000
Zarea	890.000	3.890.000	4.780.000
Silvania	153.000	807.000	960.000
Bucium	0	1.950.000	1.950.000
Jidvei	28.000	2.282.000	2.310.000
Valea	n.a.	n.a.	-
TOTAL	1.093.000		10.528.000
export%	10,4		

As made evident by the figures, even in presence of a very critical economic condition, the overall production increased along the years 92-94, while the export share fluctuated.

(in bottles)	1992	1993	1994
Total	6.795.000	6.983.000	10.528.000
Export %	9,1	15,5	10,4

Production of carbonated wine (not directly competing with VINVALDO JV's products) called "spumoso" and sold at a very low price (under the commercial brand of Afrodita) is also allowed (the carbonated wine is not allowed in Italy).

Most of the produced sparkling wines are sweet or semi-sweet types. Jidvei is apparently the only Romanian company producing the dry (brut) sparkling wine recognised by the local consumers as the quality one.

In order to evaluate price level on the market, ex-winery prices declared by local competitors are herein listed:

	export ex-winery price	domestic	(table in LEI/bottle)
Panciu	3.166		Brut, plastic cork
	2.985		Brut, real cork
		4,189	Brut, true cork
	2,518		Demi-sec, plastic cork
	2,830		Demi-sec, true-cork
		4,032	Demi-sec, true-cork
Zarea	3.440	n.a.	Sec and Demi-sec
Silvania	2.525	n.a.	
Bucium	-	n.a.	
Jidvei	3.068	4.047	Sec, Demi-sec, Nature, Rosè

As far as the brand name and customer appreciation, the following table summarises the results of the customer survey analysis (see paragraph 3.1.4 Customer Survey).

quality level	local brand	imported brand
EXCELLENT		Schloss Friedberg (D) Moet&Chandon (F)
GOOD	Jidvei	Gran Moscato (I) Angelli Imperial (I) Nynphenburg(D)
FAIRLY GOOD	Panciu Zarea	
AVERAGE	Bucium Silvania	

As a general remark, the foreign price level is 30% higher than the local one, and only the best quality and brut types are exported.

The export products have different packaging and labelling, but not always different organoleptic quality. Therefore, the production cost for export sparkling wine is basically equal to the local.

It is important to underline that the local competitors are still owned by the State, and therefore do not have a very competitive attitude towards the market.

3.1.3 International Competition

Some sparkling wines are imported from foreign countries on the local market.

French Champagne is sold in extremely limited quantities and is extremely expensive with respect to people purchasing power.

German Sekt is distributed in many areas, preferably in urban and tourist districts.

Italian Spumante can also be found, in more limited quantities than German Sekt. It is possible to find few sparkling wines from Bulgaria, especially near Costanta in the Black Sea coastal area (information from direct observations in Buchurest, in Costanta and in each of the visited towns).

In the future, important foreign competitors will come from the Republic of Moldova. Indeed, Romanian Development Agency reports that the Republic of Moldova is planning to produce 12.5 millions bottles of sparkling wines in 1995 (8 millions bottles produced in 1994). The commercial ties between Russia and the Republic of Moldova are very close, more than those operating between Romania and Russia. Furthermore, Moldova exports to Russia about the 60% of the total alcoholic beverages produced. The Moldovan Ministry of Agriculture and Food forecasts to exports to Russia 50 millions bottles of still wines and 8 millions bottles of sparkling wines in 1995. Moldova will be a strong competitor for the entire production of Romanian sparkling wine and not only for the Vinvaldo JV products.

3.1.4 Customer Survey

In the absolute absence of any published survey or data, the customer attitudes and expectations were examined through direct interviews with 202 people (88 ladies and 114 Men).

People were divided into three age categories: 18-25, 25-40 and over 40 years, respectively including 11 Ladies and 33 Men; 45 Ladies and 45 Men; 32 Ladies and 36 Men.

Some subjective criteria for a socio-economic segmentation (profession, education, ownership of car or apartment etc.) were considered, including each respondent into a selected class. 54 people were included in class A (upper), 107 people in class B (medium), 41 in class C (lower). Typically, the medium class resulted the most numerous one.

Hereinafter, the report of the results is presented about a special question concerning the quality of Local and Foreign brands of sparkling wine as perceived by consumers.

Results of a poll of 202 people on SPARKLING WINE quality perception

Level	Local brand (Points)	Imported brand (Points)
Excellent	------	Schloss Friedberg (9)
Good	Perla Marii (8.21) Jidvei (8.06)	Gran Moscato (8.57), Chochosan (8.36), Nymphenburg (8.27), Angelli Imperial (8.23)
Fairly good	Panciu (7.96), Zarea (7.94), Rhein 100 (7.5), Appulum (7.25)	
Average	Dacia (6.57), Bucium (6.42), Silvania (6.4)	
Mediocre	Trophaeum (5.18)	

Including this particular aspect, and resuming briefly the general poll analysis, it is possible to answer some of the standard marketing questions.

3.1.4.1 Product definition ('What')

The mostly preferred types of sparkling wine are sweet and very sweet, then people prefer mild, demi sec, sec etc., in the order.

In the preference of the consumers, sparkling wines rate fairly high (34%) behind still wines (42% of answers) and beer (35%) but before Liqueur (21%) or Whisky (22%) and Vodka (13%).

It is interesting to note that 51% ladies against 21% men cited sparkling wines as their best favourite beverage. This fact will not be considered in this study but it could be consistent for a future strategy of the VINVALDO JV regarding the possible segmentation of sparkling wine market, concerning women preferences.

3.1.4.2 Customers' Attitude ('Why, When and Who')

The traditional consumption of sparkling wine in Romania is considered a festive beverage. 72% of the respondents declared having consumed sparkling wine less than 5 times in the three last years and only 8% more than 10 times. Sparkling wine is consumed at home or at friends' (71%). At home consumption is apparently the most frequent (51%) as dining out is not a popular behaviour yet. Nowadays, most of restaurants and hotel restaurants serve mainly foreign people.

Regardless of the normal assumptions, there is apparently very little seasonality in the sparkling wine market. Sales are a little higher during the months of October, November and December (increasing by 20 to 40%). Of course, sales will go up in the tourist areas along with the tourist season. It is believable to budget the sales over the 12 months with 50% increase during the months of November and December and 50% off in January.

3.1.4.3 Average Consumption ('How much')

After the field survey, (the above-mentioned direct poll and other interviews of customers, retailers, restaurants and hotel operators), we came to the conclusion that the unit sale is generally in the average of 1 or 2 bottles. Sales of 6 bottles can sometimes be considered as wholesale.

People are generally expecting to pay more for an imported sparkling wine than for a national one. In average, the interviewed people are willing to pay 3,500 LEI per bottle for Romanian sparkling wine and 6-8,000 LEI for an imported sparkling wine of lower quality. No mention of imported high-quality sparkling wines and others high-end, like champagne, sekt and Spumante.

3.1.4.4 Shopping places ('Where')

The purchase is made by consumers exclusively in retail stores, En Gros markets, restaurants or hotels.

3.1.4.5 Conclusions

Summarising the main relevant issues coming out of the customer survey, we may underline:

1. People's attitude towards sparkling wine is positive, with normal consumption along the whole year (no seasonality)

2. A preference is shown towards sweet and demi-sec wines, while the brut are appreciated as the most expensive (and quality oriented). Unfortunately, a market segmentation of sweet towards brut sparkling wines was not possible. It is supposed that three-fourth of the total quantity involves sweet and related products, but a lower share of total sales.
3. The price premium for the imported wines is high with respect to the domestic ones (double the price is accepted). Foreign brand names can give additional price premium even if connected to local production.
4. The unit of sales is infrequently higher than a couple of bottles, therefore any six-bottle box would not find any acceptance on the market

3.1.5 Analysis of the Channels of Distribution

3.1.5.1 Structure of the distribution

In the past economic system wineries sold exclusively to Public Organisations, planning the needs of end-users. All the wineries now challenging on the market are facing great changes in relations both with buyers and with suppliers.

In the past centralised economy, each productive unit had generally market relations with few buyers and suppliers. A big company, such as VINVICO itself, before the revolution sold only to a few clients. Now the same winery could sell to at least 600 clients trying to extend this number to increase profits, and could open direct contact to the retailers.

The number of retail stores increased from 23,643 in 1980 up to 24,910 in 1985, and then declined down to 17,433 in 1992 and to 15,266 in 1993 (Annual Statistic Al Romania 1994).

The actual relation involving producers, wholesalers and retailers are yet very unclear, because the past vertical ties amongst the organisations still resist. The traditional regional approach of commerce induce great differences and some confusion in the market system, but generally, there are no business relations based on exclusivity and everybody is free to sell to everybody.

It is not difficult to foresee that in the next few years the retail system will have great changes linked to the privatisation and liberalisation governmental policies.

Until now, the distribution system consists of Retailers, Wholesalers, En Gross sellers, Professional Wholesalers, Wineries. The wineries are free to

sell to any step of the system. As observed, there is no price differentiation between direct and indirect selling.

3.1.5.2 Retail Stores

In Romania, there are three types of retail stores, Traditional type, Private stores, Restaurants/Hotels. Usually, the private stores have a better selection of products and a better use of commercial spaces. There is not difference in salespeople friendliness, cleanliness or knowledge of products. As said, often prices are the same of the public retailers. The professional level of merchandising need great efforts in upgrading. Restaurants often serve several types of sparkling wines, but knowledge of served products is generally poor, linked to the non-professional skill of waiters, specially out of Buchurest.

3.1.5.3 En Gross sellers, Professional Wholesalers, Wineries

Wholesaler is a very new profession in Romania and related rules are not yet spelled out. Besides the official statistics, but according to some wholesalers interviewed in Bucharest, about 30% of beverages are sold through wholesalers. The remaining 70% of beverages come from the wineries directly to restaurants or retail stores or to consumers themselves.

Probably, the still large role of little and very little retailers is due to the imperfect functioning of the distribution system, leaving several niches of activities not always well remunerated.

As observed in Western countries, due to scale economies, the distribution system will evolve toward a natural enlargement of wholesalers up to the 50% of the alcoholic beverages market in 5-7 years.

Presently, the general weakness of wholesalers has not been compensated by the wineries themselves. Beside the efforts of two or three wineries (including VINVICO itself), there is a very powerful effort performed by producers in marketing. In this situation the market efficiency is far from western standards.

Generally, the existing depots belong to wholesalers or retailers, while wine is shipped or picked to or from retailers, wholesalers, restaurants by the wineries themselves.

As observed, the price differentiation is really confusing and any price strategy performed by producers or sellers seems to be lacking. They still use

traditional pricing system that identify value (and then price) with labour content of the products. This induce confusion and the same prices can appear at different level of the distribution channels. Unfortunately this fact induce the actual possibility of commercial frauds, considering the uncertain legal framework[1].

Nevertheless, it was possible to point out the average mark-up of each commercial phase. Wholesalers declared a mark-up of 10-15%, Retailers of 25-30%, and Restaurants & Hotels of 200-300% (see paragraph 3.1.6 Price formation).

New, smaller and more efficient organisations are replacing the previous large centralised ones. The new retailers are willing to place more emphasis than the traditional ones on western marketing principles such as rotation of stocks, margins, shelf space, support from wholesalers and suppliers in promotion, display and advertising of particular products, quality of services, delivery etc.

The changes in the hotel and restaurant sector have barely started even if most of the hotel and restaurants in Romania are still public companies.

3.1.6 Price formation

The cost structure is made up by several intermediate passages through the distributing channels. The most common structure, as well as the structure which is envisaged to stabilise at the end of the present turbulent evolution, is described hereinafter.

- At the beginning, the winery cost (see the ex-winery prices considered in the first tables reporting about the references for the different producers) is increased by the excise duty (115% on sparkling wine), than the total cost is further charged by the Added Value Tax (VAT). The total cost for the wholesaler is therefore 2.15 times the ex-winery price, plus 18% VAT

- The normal mark-up of the wholesaler is about 10%-15%. Therefore, the total wholesaler to retailer price is 2.365 times the ex-winery (considering 10% mark-up), plus VAT 18%

- Again, the average mark-up of the retailer is about 25%-30%. Therefore, the total customer price is about 3.07 times the ex-winery, plus 18% VAT.

[1] NB For instance consider the special case of the Angelli sparkling wine. The Angelli Gran Spumante is really a carbonated wine (in Romania so called spumoso), but the market price is equal to a medium-high quality product due to the Italian brands and the design of labels. It is nearly impossible to read the labeling of spumoso because of the "microscopic" typing on the label.

A simple calculation is shown as example of the price formation for a bottle of sparkling wine.

Winery	cellar price (per bottle)	2,500 LEI
	excise duties (115%)	2,875 LEI
	cost at wholesaler	5,375 LEI
	VAT 18%	967 LEI
	total	6,342 LEI
Wholesaler	total cost	5,375 LEI
	margin 10%	537 LEI
	cost at retailer	5,912 LEI
	VAT 18%	1,064 LEI
	total	6,976 LEI
Retailer	total cost	5,912 LEI
	margin 25%	1,478 LEI
	cost at retailer	7,390 LEI
	VAT 18%	1,330 LEI
	total	8,720 LEI

If ex-winery price for Vinvaldo was 2,500 LEI/bottle, the wholesaler would buy at LEI 6,976 (included VAT), and adding its 10% margin, it would sell to the retailer at 7,712; adding an additional retailer margin of 25 % and deducing the VAT rate, the custom price would be set at 8,720 LEI/bottle.

3.2 International Market Analysis

3.2.1 Geographical Definition

Russia, Hungary, Poland, Czech Republic are the greatest importers of sparkling wine from E.U.

The total population of the local and "near local" market (Romania itself, then Poland, Czech Republic, Hungary) sums up to about 81 million people.

Including other countries as potential markets, such as, Bielorussia, Bulgaria, Estonia, Lithuania, Slovak and Turkey, the total target population sums up to about 90 million people. Russia itself has a population of 148.2 million people. All these people were used and are used to consume sparkling wine.

Romania is nowadays one of the poorest country in Eastern Europe with less than 1,000 US $ of per capita and per year income. The richest countries such as Hungary or Estonia, have a GNP/capita of more than 3,000 US $. Russia is slightly poorer, but has a very huge potential market.

Therefore, considering the total population, the total imports of sparkling wine and the GNP/capita and the cultural similarities, it is possible to point out that the best foreign markets for Romanian sparkling wine could be considered Russia, Poland, Ukraine, Bielorussia, Hungary, Bulgaria: additional countries such as Czech Republic, Lithuania, Estonia and Turkey could be considered as well.

3.2.2 Market size estimations

The potential market for the projected JV is very large and includes several Eastern Europe Countries, such as Poland, Czech Republic, Hungary, Bulgaria, Turkey, Russia, Ukraine, Bielorussia, Lithuania, Estonia.
Trying to size the overall sparkling wine market in those countries, and lacking official reliable statistics, information derives from the trade exchange of the European Union.

In particular, the import figures (year 1992 and 1993) in the listed countries of the E.U. were examined, taking into consideration the limited category of sparkling wine: as a matter of fact the JV goal is to produce a quality-level sparkling wine, in line with the customers' expectation towards imported wines, and in line with the organoleptic qualities of an Italian product.

From this standpoint, the estimation of the imported (in those countries from the E.U.) sparkling wine market as the reference one for the access of JV's products can be considered consistent .

The population and the GNP/capita for the countries are reported in the following tables. The countries are divided into a first batch of neighbouring countries (Poland, Hungary and the Czech Republic), and a second for all the others.

Population and per capita GNP of Poland, Hungary and the Czech Republic (Neighbouring Countries)

	Population (Million pp)	GNP/capita USD
Poland	38.4	2,270
Czech Republic	10.3	2,730
Hungary	10.2	3,330

Furthermore, imports of sparkling wines from the European Union for the Countries and per 1992-93 are reported (all figures in Hliters).

Imports of sparkling wines coming from the European Union (customs reference: 22 04 10 11 and 22 04 10 19)

	1993			*1992*		
Exp. Countries	*Quant. Hl*	*Amounts 000 Ecus*	*Market Share*	*Quant.*	*Amounts 000 Ecus*	*Market Share*
			(Poland)			
Italy	5102	700	50.0	3124	467	62.3
France	3639	506	38.7	877	210	24.2
Germany	857	130	7.2	740	108	9.8
Spain	280	87	4.1	193	55	3.1
Total	9879	1424		4934	840	
			(Hungary)			
Italy	2794	273	59.6	1902	146	79.1
France	436	202	15.5	247	194	9.2
Germany	998	201	21.2	400	108	9.8
Spain	79	21	3.8	79	19	1.9
Total	4309	699		2628	467	
			(Czech Republic)			
Italy				461	56	35.1
France	5	1	10.5	198	175	19.1
Germany				614	112	39.1
Spain	51	15	89.5	70	16	6.6
Total	56	16		1343	359	

Population and per capita GNP of Other possible target Countries

	population (Million pp)	GNP/capita (USD)
Turkey	59.6	2,120
Bielorussia	10.3	2,840
Bulgaria	8.4	1,160
Estonia	1.5	3,040
Lithuania	3.7	1,310
Russia	148.2	2,350
Slovak	5.3	1,900
Ukraine	52.1	1,910

Imports of sparkling wines coming from the European Union (customs reference : 22 04 10 11 and 22 04 10 19)

	1993			*1992*		
Exp. Countries	*Quant. Hl*	*Amounts 000 Ecus*	*Market Share*	*Quant.*	*Amounts 000 Ecus*	*Market Share*
			(Russia)			
Italy	212800	16236	57.0	29646	2583	41.6
France	36840	8299	15.6	8656	1362	19.9
Germ	74396	7129	19.8	20121	2131	27.5
Spain	26713	8300	7.3	7525	1699	11.0
Total	350749	39964		65948	7775	
			(Ukraine)			
Italy	2193	198	24.6	198	39	25.0
France	991	265	16.6	230	39	31.9
Germany	5080	577	56.7	405	57	43.1
Spain	184	32	2.1			
Total	8448	1072		833	135	
			(Bielorussia)			
Italy	2096	189	22.7	45	5	3.0
France	877	101	14.0			
Germany	5842	611	63.3	876	106	62.0
Spain				495	117	35.0
Total	8816	901		1416	228	

			(Bulgaria)			
Italy	148	11	29.3			
France	201	35	67.7	18	25	7.5
Germany		2	0.2			
Spain	14	2	2.8	222	53	92.5
Total	364	50		240	78	

			(Turkey)			
Italy	33	6	1.9			
France	1046	2184	78.9	727	1289	86.4
Germany	231	69	13.2	168	54	13.1
Spain						
Total	1310	2259		895	1343	

			(Estonia)			
Italy	283	29	7.8			
France	1665	179	50.9			
Germany	1554	189	39.9	42	5	40.0
Spain	57	15	1.4	66	8	60.0
Total	3559	408		108	13	

			(Lithuania)			
Italy	2			21	1	3.6
France	1623	294	68.9		3	
Germany	1089	129	26.5	286	37	49.7
Spain	106	41	4.5	270	71	46.6
Total	2820	464		577	112	

From all the previous, it is possible to order the best potential market for sparkling wines in Eastern Europe with respect to 1992 and 1993.

Best markets for sparkling wines in Eastern Europe and in Black sea Area

table in '000 ECU	1992	1993
Russia	7,779	40,235
Turkey	1,344	2,295
Poland	807	1,424
Ukraine	136	1,074
Bielorussia	229	901
Hungary	470	699
Lithuania	114	466
Estonia	14	413
Bulgaria	79	52
Czech Republic	361	31

3.2.3 Potential Market and Price Definition

For the sake of a sound and prudent forecast, let's start considering the aggregate market for 1993 only out of those countries with strong similarities (with Romania in terms of economics); therefore considering only the following (data from 1993 sequences):

Country	Tot Import Hl (1993)	'000 ECU	average cost ECU / Lt	conversion LEI / bottle
Poland	9,879	1,424	1.44	2,700
Hungary	4,309	699	1.62	3,037
Russia	350,749	40,253	1.14	2,137
Ukraine	8,448	1,074	1.66	3,112
Bielorussia	8,816	901	1.02	1,912
Bulgaria	364	52	1.42	2,662
TOTAL/AVERAGE	**382,565**	**44,403**	**1.28**	**2,400**

Considering an average of 0.7-0.75 Lt/bottle, the total amount corresponds to about 50-54 Millions of bottles, which represents the potential market per year. Of course, any improvement in the national GNPs would result in enhanced domestic market size, being the imported sparkling wine considered rather indicators of standing more than primary needs.

As a preliminary estimation, the average price coming from the previous table (converted to LEI for an easy reference) ranges from 1,912 LEI/bottle (Bielorussia) to 3,112 LEI/bottle (Ukraine), with an average of 2,400 LEI/bottle.

Considering more carefully the reference country (i.e. Russia), the bottle price -at customs level- is priced about 2,137 LEI/bottle. It should be clearly understood that the mentioned statistics do apply exclusively to the sparkling wines imported from the E.U.: it means that the figures do include (mostly) the upper end of the market, while the domestic producers are not mentioned at all.

As already mentioned, to fully benefit of the foreign market it will be essential to characterise the product of Vinvaldo JV as a new, Italian-like sparkling wine or as a Romanian product processed by Italian enological expertise. Only under these conditions the marketing competition based exclusively on price can be reverted to the quality and brand name fields, together with the connected price premium.

As far as the **international market** is concerned, and operating over the overall estimated accessible market of 50 Millions of bottle/year (selling through the existing distributing channels of VINEXPORT or through the direct channels the Italian partner has with the whole area and particularly with Russia), it seems a consistent, prudent estimation to target **about 1.5%** of the total market, given an appropriate selection of the reference price. It should pointed out that, especially at the beginning the competition strategy can only (or mainly) be based on price level, while the quality assessment can come along with the brand name appraisal by the consumer market.

As a reference sizing, the assumptions would lead to a total international market access of about **800,000 bottles/year** at regime.

3.3.3 Market Share

The estimated market size is about 1 million bottles produced by the new company Vinvaldo JV, split by about 200,000 bottles on the local market (about 2.0% of the local market) and about 800,000 bottles/year (1.5% of the accessible market) for the foreign markets.

Technically the projected maximum production (1 million bottles) can be reached at the end of the first year.

3.3.4 Price Definition

As explained, the target of the Vinvaldo JV is to produce a line of quality sparkling wine in bulk processing. This will permit to have higher quality at near the competitors' price level.

The JV Vinvaldo aims primarily at winning the competition in local and foreign sparkling wine markets. The very first goal of the Italian partner is to benefit of the cost differentials between Italy and Romania (as far as raw materials and labour are concerned), while producing a foreign-quality product directly in Romania.

A very tight competition exclusively based on the price level cannot be completely deployed, as per the investigated production costs level (see Chapter 4 Raw Materials and Supplies).

3.3.4.1 Domestic Price definition

Because of the impossibility of shrinking the industrial costs over a certain extent, the policy of competing on both price and quality implies not to

challenge on some very competitive market, such as the lower level of consumers targeted by sparkling wine (normally sweet ones) such as above mentioned "Dacia", that can be sold in local market at 3,000-3,500 LEI/bottle (retailer price).

If Vinvaldo JV sells a "high quality" product at **2,500 LEI/bottle** at winery price the retail price will be around 8,700-9,000 LEI.

In this case, in the local retail market, the product will be competitive against Nymphenburg, Ciociosan, Cristallo Spumante Capetta, Schloss Friedberg, Cuvée Imperiale Angelli sold at a retail price between 4,500 and 10,000 LEI, because of the appealing mix of quality and price, together with the Italian brand image. Furthermore, the product could be competitive as substituting imported products (which are sold in the range of 20,000 LEI per bottle).

3.3.4.2 International Price definition

Considering to deduct the transport costs (estimated up to 620 LEI/bottle from Italy to the reference market of Russia: however a lower amount should be taken into consideration from Romania to Russia; therefore about 530-540 LEI/bottle was considered), the average reference price to Russia could be stated at the lowest level of about **1,600 LEI/bottle.**

Such a price level could permit to enter the potential market of about 50,000,000 bottles/year, still with an aggressive price competition but with superior quality, therefore justifying the expectation of an improved positioning within a period of few years. However, to perform a prudent evaluation, in the present analysis the foreign marketing price of 1,600 LEI/bottle (ex-winery) was considered constant for the whole planning horizon, at a level of 800,000 bottle/year.

3.3.5 Outline of the marketing concept

3.3.5.1 Product definition

The final products of the Vinvaldo JV should offer (domestic market):

- good enological qualities (Champenoise method, brut type)
- appealing Italian style
- price positioning cheaper than the highest imported qualities, in the range of the good national products

On the international market, the final products of the Vinvaldo JV should offer:

- good enological qualities (Champenoise method, brut type)
- appealing Italian style
- cheapest price positioning with respect to same-level products

The competition could be towards any type of sparkling wines today marketed in Eastern Europe, besides the very superior high quality sparkling wines (imported French "Champagnes" or Italian "Spumanti"), produced by means of the Champenoise method, and besides the very low-end of sales (carbonated wines).

3.3.5.2 Competitive Attitude

In any case, the price competition is still the key issue of the project strategy: the price levels for both the domestic market and the international market have been selected according to the principle of being cheaper (or at least as cheap as) than the competitors.

Furthermore, if the direct sales to the retail level (especially on the local market) are successfully enlarged, the JV company will get the additional benefit of a larger margin to the same end-user price. However, to give to the study a sound perspective, for the time being no direct channel to retailers has been considered.

An additional support for the JV company should come from the progressive improvement of the brand image, resulting (especially abroad) in a less stringent competition on the price level. Again, to give stable assumptions to the study, no increase of price (due to quality premium) was considered in the present study (see chapter 10 financial Analysis).

3.3.5.3 Product Image

The marketing attitude must have special care in the labelling design of bottles and packaging to achieve a correct presentation to end-users. The targeted consumers are tourists and, local population belonging to the higher classes. To promote the image of high quality, the links with a renowned Italian producer need to be emphasised, for instance by joining an Italian brand to a local well-known product name (name of a special area famous for certain production, or name of a location specific for the production, such as a villa, an ancient ruin or others), or simply by a suggestive name as

"VIVALDI SPARKLING WINE", symbolically recalling both Vinvico and Valdiso Companies as well as a very famous Italian musician name.

The most correct positioning of the product seems to be entitled to "an Italian product made in Romania - manufactured under Italian enologists' control".

3.3.5.4 Distribution

Distribution will be the key to the future enlarging of the market. The feasibility study bases on the real possibility to sell using the existing commercial relation of the Romanian partner (Vinvico), including its existing relations with Vinexport. In the next future the promoters will have to develop a policy for controlling the distribution of their products, both in terms of sales channels (the greatest the proximity to the retailers the greatest the ex-winery direct margin) as well as in terms of final end-user price.

The new company will be able to distribute its products directly or trough controlled distributors or to become a shareholder of Vinexport. In any case, it seems crucial for the JV to set up an independent distributing channel, even though the initial step into the market can be obtained by Vinexport.

Chapter 4. Raw materials and supplies

4.1 Classification

For the production of sparkling wines in the Vinvaldo Company the following raw materials are required:

n.	Raw Material list
1	Sparkling wine base
2	Sugar
3	Selected yeast (Auxiliary materials)
4	Bottle ml. 750 gr. 880
5	Plastic "mushroom"- cork
6	Metallic cage for bottles
7	Tinfoil capsule
8	Label + collar
9	Cardboard box for 12 bottles + hive
10	Electricity and thermal energy
11	Water
12	Nitrogen

4.2 Requirements

To produce 1 unit of output (1 bottle of sparkling wine 0.75 Lt) with losses included, the following amount of raw materials are required:

n.	Raw Material list	unit	qty.
1	Sparkling wine base	Hl	0.0075
2	Sugar	Kg	0.0338
3	Selected yeast (Auxiliary materials)	gr.	0.023
4	Bottle ml. 750 gr. 880	n.	1.02
5	Plastic "mushroom"- cork	n.	1.02
6	Metallic cage for bottles	n.	1.02
7	Tinfoil capsule	n.	1.02
8	Label + collar	n.	1.02
9	Cardboard box for 12 bottles + hive	n.	0.085

4.3 Availability and supply

The availability of each item in the local or the foreign markets is the following:

1. Sparkling wine base	local (by Vinvico)
2. Sugar	local
3. Selected yeast	local
(Auxiliary materials)	
4. Bottle ml. 750 gr. 880	imported
5. Plastic cork	imported
6. Metallic cage for bottles	imported
7. Tinfoil capsule	imported
8. Label + collar	imported
9. Cardboard box for 12 bottles + hive	imported
10. Electricity and thermal energy	local
11. Water	local
12. Nitrogen	local

4.4 Market supplies

In the local market it is possible to buy the items above mentioned as "local". They are already in use by Vinvico for its present range of productions. Imported items come from Italian producers.

Even if for these items a local market does exit, the importation is strictly necessary as far as it is impossible to find the correct quality in the Romanian market.

For instance, the average size of plastic corks is usually different from the average size of bottle-necks so that the sparkling wines loss their quality losing pressure during time.

4.5 Costs of raw materials and supplies

4.5.1 Raw materials

The average price of white grapes paid by Vinvico during vintage '94 in the 3 above mentioned farms was 265 LEI/Kg.

The price is commonly fixed according to the soundness of the grapes. Vinvico s.a. will provide to the Vinvaldo JV the sparkling base-wine obtained with good quality grapes, clarified, stabilised and filtrate, quoting 545 LEI/Lt for the processed base-wines.

In the local market it is possible to buy sugar and yeast at the bottom mentioned prices:

1. Sparkling wine base	LEI/Lt	545
2. Sugar	LEI/Kg	1.000
3. Selected yeast	LEI/Kg	80.000

4.5.2 Auxiliary materials

Local prices for cork, metallic cage and capsule are really high, therefore it is cheaper importing them from Italy. The costs of auxiliary materials are as follows:

1. bottle ml. 750 gr. 880	LEI 300
2. plastic mushroom-cork	LEI 50
3. metallic cage for bottles	LEI 50
4. tinfoil capsule	LEI 60
5. label + collar	LEI 20
6. cardboard box for 12 bottles + hive:	LEI 1,500

4.5.3 Use materials

Use materials include filters, glue, chemicals, etc.: a global cost of 30 LEI/bottle is forecast.

4.5.4 Energy cost

The energy cost is globally (reference to a 1,000,000 bottle/year production capacity) determined as follows:

Item	Unit Price	Consumption per total capacity
electricity	110 LEI/Kwh	120,000
energy	0.025 LEI/Kcal	110,000
water	104 LEI/mc	2,000
nitrogen	500 LEI/Lt	25,000

A global cost of 30 LEI/bottle is forecast.

4.5.5 Cost of maintenance

In the cost of maintenance the machinery maintenance and the respective spare parts are included.

The forecast cost is LEI 10/bottle.

Chapter 5. Location, site and environment

5.1 Location analysis

Romania lies in South Eastern Europe, in the northern part of the Balkan Peninsula. Costanta is one of the main cities with around 200,000 inhabitants.

The namesake District (near 450,000 inhabitants) lies on the sea coast of the Black Sea between the border on Russia to the North and Bulgaria to the South for about 250 Km.

The Costanta District is bordered on the Danube River to the North and to the West, on the Black Sea to the East and to the South on the Bulgarian border.

It is a tableland (rising in average to 400 m) crossed by the Danube-Black Sea Canal from the city of Cernavoda to the city of Mejidia and then to the Sea near the city of Navodari.

Besides the Moldavia and the Transilvania Regions also the Black Sea coastal strip (District of Costanta) is well known for the production of wines: Feteasca Regala and Feteasca Alba in particular. Traditionally was an exporter producer of sparkling "Champenoise" wines towards Russia and other Eastern Countries.

5.2 The natural environment

The Black Sea Coastal strip has its own special environment, including a temperate climate with continental aspects.

The average annual rainfall is lower than in other regions and it is only about 450 mm. The average temperature in January is - 2 °C, while in the Summer is about 20 °C.

The general climate conditions are similar to a sub-Mediterranean area with non particular difficulties or extreme conditions.

The landscape is still the result of the central planned economic policy. The population is mainly living in towns and villages with no scattered settlements and the agricultural land is divided in very large farms. Most of

the land is cultivated with wheat and other cereals while on the hills there are large surfaces of vineyards.

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5.3 Environmental impact assessment

The Vinvaldo JV will produce sparkling wines using the present industrial settlement of Vinvico s.a. and it will use the present infrastructures of wasting and sewer.

As a matter of fact, the interactions of the Project with the local natural, cultural and economic environment are not relevant.

The environmental impact of the Project is compatible with the present standard of environment.

5.4 Economic policies

1989 is a topical year in the history of Romania. The revolution stopped a 40-year centralised economic system. After 1990, the Government faced a general weak condition, characterised by fragility both in political and economic conditions. Finally, in 1993 some economic indicators began to grow up. The industrial production and the agricultural sector guided the starting of the restoration of the economy. The positive trend is due to the introduction of incentives for foreign investors and to the liberalisation of the private initiative in all the sectors of the economy.

In Romania, the following main issues are relevant to the foreign investment:

- the private enterprise is fully recognised by law
- the production and distribution sectors are not characterised by organised competition, thus leaving huge free market space for foreign introductions
- labour force is well educated, and can adapt easily to any employment
- labour cost is still much lower than in the European Union
- resources are largely available in the agro-industry field

5.5 Infrastructure conditions

The Project will take advantages from the location in the Costanta District and in particular in the Vinvico plant. As a matter of fact, Costanta is the most important port of Romania, being the most important base for shipping agricultural and industrial goods (such as cereals and petroleum) through the Black Sea and the Danube River to all the neighbouring Countries.

Romania has railway and road networks of about 11.000 Km and 70.000 Km respectively.

A waterway system is available of up to about 1.900 Km.

Costanta benefits from international airway connections.

The Vinvaldo JV could use a railway track still ending at the Vinvico plant.

Besides that, water and electricity are available.

The human resources could be the critical point of the project. Skilled and semi-skilled workers are even more than available. This abundance could produce social conflicts in future due to different wages, or even different working conditions, between Vinvaldo (Italy) and Vinvico (local JV employees) workers.

A second critical point is related to the local management quality and efficiency.

Some of the local managers do not always agree with the general strategy of the project. For this reason, it is strictly mandatory that an Italian manager supervises the whole project implementation in order to control any step of the processing and marketing system and not only during the plant construction or the personnel training.

Problems about the effluent and waste disposal have not to be taken into consideration. The Vinvico plant has already in use an efficient system of wasting and sewer.

5.6 Final choice of location

Within the marketing strategy, that is extend the area of sales even abroad (Russia), the selection of the location in Costanta is definitively suitable. The choice of Vinvico as a local partner will be also reasonable as the project is based on the availability of raw material such as sparkling base-wine. Vinvico is presently able to assure the necessary quantities and qualities of wines besides other basic structure and infrastructures.

The base-wine is available in a range of less than 80 Km, served by a good road network.

The shipping is easy by train, trucks or by other means.

5.7 Costs estimates

In order to evaluate the cost of investment related to buildings, some uncertainty is linked to officially registered data and to the lack of any formal registered contract.

Furthermore it is impossible to appraise the market price of the building due to the absolute lack of purchasing power examples or renting of similar buildings. Therefore, the present estimation is calculated according to the cost of the restoration, evaluated by 150.000.000 LEI.

Chapter 6. Engineering and technology

6.1 Production programme and plant capacity

Since 1990 the Romanian Government made over the agricultural lands to farmers, who now run the farm in co-operation.

Vinvico produces wine from 300.000 ql (1 ql = 100 Kg) of grapes per year, in 12 owned centres (cellars) of production, located in the District of Constanta in a range of less than 80 Km.

Vinvico buys only the grapes to cover its needs, while the remaining of the agricultural production exceeding the marketing capacity of Vinvico s.a., which is about the half of the total production, is wine-made and stored on behalf of a third party.

The actual availability of grapes is therefore 150.000 ql per year, but it is not all suitable for the production of sparkling wine. As a matter of fact, the technique of cultivation of vineyards is rather approximate; for instance in Tariverde farm, after pruning, in each hectare remains a very large number of buds (180.000-200.000).

Irrigation is not available and the soundness of grapes is precarious and discontinuous. Therefore, it will be necessary to select the best quality grapes.

During the field mission, 3 wine-making centres have been selected (Aliman, Medgidia and Tariverde) as potential base-producing centres, thanks to the presence of stainless steel tanks with cooling plant (where not running because of the absence of Freon 12). In these 3 wine processing centres there is the actual possibility of processing the white grapes for the production of base sparkling wine.

FARM	SURFACE (ha)	PRODUCTION 1994, (ton)	CAPACITY INOX (hl)
Aliman	540	3,500	12,000
Medgidia	305	2,000	3,000
Tariverde	183	1,300	10,000
TOTAL	1,028	6,800	25,000

The actual and potential productivity of these farms are sufficient to produce the necessary base sparkling wine for the total production of 1.000.000 bottles forecast in the Vinvaldo JV beginning from the first year of production.

Following the organoleptic tests conducted by the Italian technologist during the field survey, all varieties of grapes produced in the 3 selected farms, can enter in the cut to obtain the sparkling wine base. The existing wine-making equipment is rather precarious and obsolete, it allows wine production only by drawing the wine off, with a yield of 50-60%.

The cooling plants are not running or they had never run and they are probably not recoverable. Furthermore, the more elementary sanitary and cleaning regulations of the wine pots are lacking.

The percentages in the wine cutting should be decided during the wine-making, according to the quality of base-wines and the quantity of sparkling wine which would be produced.

Today all wines have the common defect of a really high volatile acidity (from 0,50 to 0,70 gr./lt) that confirms the above mentioned precarious soundness of grapes and wine-making technique, so that unhealthy pots sometimes compromise the wine quality.

The quality potential is high, but investments on equipment and personnel for wine-making are necessary to guarantee the required quality standard.

The Vinvico chemical laboratories provided the basic analysis of cellar tests as follows:

1) FETEASCA - MOSCATO 1994/1

Alcohol	11,00	%vol.
Ac.tot.	8,20	gr/l
Ac.Vol	0,48	gr/l
SO tot	110	mg/l

2) FETEASCA - MOSCATO 1994/2

Alcohol	11,20	%vol.
Ac.tot.	7,80	gr/l
Ac.Vol	0,70	gr/l
SO tot.	110	mg/l

3) FETEASCA - MOSCATO 1994/3

Alcohol	11,20	%vol.
Ac.tot.	7,80	gr/l
Ac.Vol	0,50	gr/l
SO tot.	140	mg/l

4) CHARDONNAY - FETEASCA 1993

Alcohol	12,00	%vol
Ac.tot.	6,00	gr/l
Ac.Vol.	0,70	gr/l
SO tot.	194	mg/l

5) FETEASCA 1993

Alcohol	11,80	%vol
Ac.tot.	5,50	gr/l
Ac.Vol	0,68	gr/l
SO tot.	180	mg/l

The Vinvaldo JV will produce a sparkling wine that will be included in the category called "Vino Spumante Demi-sec" by the regulation STP 109/92 of the Romanian Agricultural Ministry. It is a sparkling wine obtained by a natural fermentation in pressurised vats, with a minimum degree of 11% vol., sugar from 15 to 40 gr./lt and minimum pressure of 4 bar.

The complete cycle lasts 30 days in pressurised vats, of which 25 for the sparkling process and 5 for the bottling of the semi-finished product. Then a second phase of labelling and packaging follows, which lasts 7 working days, necessary for the drying of the bottles.

6.2 Technology choice

The technology choice is based on the previous centenary experience of Valdo management in Charmat method of sparkling wine producing. Roughly, it consists in the processing of base sparkling wines in stainless pressurised vats of about 450-500 Hl by adding yeast and controlling the temperature of fermentation by cooling system.

The project forecasts a starting production of 1 million bottles per year, so that the engineering project is based on this data. It is possible, however, with further investments for pressurised vats, the upgrading of the bottling line and the storehouse for finished products, to reach a production capacity of 3 millions bottles per year. Further developments are not possible because

of lack of space, therefore a new engineering project would be necessary, choosing a new area.

In view of the present wine market in Romania and in other Eastern Countries it is possible to forecast that the cellar technology will be up to date for many years and in any case the project life would be long. There will be no negative social or economic impact since the consumers already know sparkling wines and the workers are able to manage wine processing techniques.

6.3 Technology acquisition and transfer

The technology will be allocated from Italy. The method of sparkling is the Charmat method available buying Italian machinery and using Italian industrial know-how. The know-how is provided by Valdo industries management and the machinery will be bought as shown in annexed offers of Italian producers.

6.4 Detailed plant layout and basic engineering

The processing layout to produce sparkling wine in the Vinvaldo JV includes the Sparkling, the Bottling, the Labelling and Packaging phases:

A. SPARKLING PROCESS

1) Purchase of the sparkling base-wine from Vinvico with a minimum degree of 10,5% vol. Filling of the vat and addition of the selected yeast and 6 Kg/hl of saccharose. TIME NEEDED 1 DAY.

2) Fermentation under controlled temperature until 5 bars are reached. TIME NEEDED 14 DAYS.

3) Cooling and centrifugation in the bottling pressurised vat. TIME NEEDED 2 DAYS.

4) Tartaric stabilisation. TIME NEEDED 8 DAYS.

5) Bottling. TIME NEEDED 5 DAYS.

With this cycle 2 pressurised vats of 450 hl are necessary, so that every month 100.000 bottles of sparkling wine can be produced.

B. BOTTLING PROCESS - 1st phase

1) Loading of the empty bottles on line. NECESSARY PERSONNEL: 2 UNSKILLED WORKMEN

2) Washing of the new bottles for sparkling wine. This could be considered a precautionary phase, due to the conditions the bottles arrive from the glass work. NECESSARY PERSONNEL: NO ONE

3) Isobaric filling at low temperature with prior sterile filtering. NECESSARY PERSONNEL: 1 SKILLED WORKMAN

4) Corking with plastic mushroom-cork and filtering. NECESSARY PERSONNEL: 1 SKILLED WORKMAN

5) Application of metallic cages on the bottles. NECESSARY PERSONNEL: 1 SKILLED WORKMAN

6) Transfer of the full bottles in metallic containers. NECESSARY PERSONNEL: 2 UNSKILLED WORKMEN

C. LABELLING AND PACKAGING PROCESS - 2nd phase

1) Loading of the full bottles from the metallic containers on the line. NECESSARY PERSONNEL: 2 UNSKILLED WORKMEN

2) Distribution of tinfoil capsules. NECESSARY PERSONNEL: 1 SKILLED WORKMAN

3) Smoothing of the capsules. NECESSARY PERSONNEL: NO ONE

4) Labelling. NECESSARY PERSONNEL: 1 SKILLED WORKMAN

5) Automatic box forming. NECESSARY PERSONNEL: 1 SKILLED WORKMAN

6) Automatic boxing. NECESSARY PERSONNEL: NO ONE

7) Quality control. NECESSARY PERSONNEL: 1 UNSKILLED WORKMAN

8) Automatic box closing. NECESSARY PERSONNEL: NO ONE

9) Manual placing on pallets. NECESSARY PERSONNEL: 1 UNSKILLED WORKMAN

D. SELECTION OF MACHINERY AND EQUIPMENT

The following machinery has been selected in order to reach the forecast production capacity:

1) Production line (Sparkling process)

- 2 pressurised vats of 450 hl each
- 2 thermal covering for the above mentioned vats
- 1 cooling station with pumps and glycol-tank
- 1 second-hand centrifuge Alfa Laval
- 1 filter Master 40x40
- 1 electric fuel pump
- transport, assembling, electric and
- hydraulic connections costs

2) Bottling line

- 1 second-hand rinsing equipment
- 1 filling equipment
- 1 corking equipment
- 1 equipment for application of metallic cages on the bottles
- 1 capsule equipment
- 1 labelling equipment
- 1 box forming equipment
- 1 boxing equipment
- 1 closing box equipment
- transporting belts
- electric panel
- micro filtering system
- transport, assembling, electric and
- hydraulic connections costs

The entire set of machinery will be provided and installed by the Italian supply industries.

E. Civil Engineering works

Part of the building available from Vinvinco has been identified for the accomplishment of the project. The building is located in the Vinvinco cellar

in Constanta. It is easily reachable by vehicles and is connected to a train terminal. All around there are free spaces for easy vehicular traffic.

Indoor space available for the bottling and storage is 1.000 square metres, with possibility of enlarging for further 200 mq. Outdoor space which should be used for the pressurised vats is of 200 mq. The building is 5 m high and does not allow the allocation of the vats. The building is presently not in use, so that a complete restoration to meet the needs of Vinvaldo production is necessary.

F. ESTIMATES OF OVERALL INVESTMENT COSTS

The total amount of money to purchase all equipment necessary for the production is of LEI 1.187.500.000. This investment is shared as follows:

SPARKLING PROCESS	unit cost (LEI)
2 pressurised vats of 450 hl each	140,075,000
2 thermal covering for the above mentioned vats	24,500,000
1 cooling station with pumps and glycol-tank	103,506,250
1 second-hand centrifuge Alfa Laval	31,250,000
1 filter Master 40x40	23,050,000
1 electric fuel pump	5,675,000
transport, assembling, electric and hydraulic connections costs	62,500,000
TOTAL	390,056,250

PRODUCTION	unit cost (LEI)
1 second-hand rinsing equipment	50,000,000
1 filling equipment	100,000,000
1 corking equipment	22,500,000
1 equipment for application of metallic cages on the bottles	25,000,000
1 capsule equipment	25,000,000
1 labelling equipment	31,250,000
1 box forming equipment	25,000,000
1 boxing equipment	18,750,000
1 closing box equipment	15,000,000
transporting belts	125,000,000
electric panel	31,250,000
micro filtering system	12,500,000
transport, assembling, electric and hydraulic	125,000,000

connections costs	
TOTAL	606,250,000

VARIOUS EQUIPMENT	unit cost (LEI)
Full bottles containers	15,437,500
Fork-lift trucks	85,000,000
Air compressor	6,250,000
TOTAL	106,687,500

CONTINGENCIES	unit cost (LEI)
Unforeseen events 7%	83,750,000

To reduce the total amount of the investment as much as possible, the purchase of second-hand revamped equipment has been considered to the maximum extent possible.

The second hand selection slightly delays the time schedule for the completion of the plant, estimated to about 9 months from the date of purchase orders.

Chapter 7. Organisation and overhead costs

7.1 Plant organisation and management

The industrial enterprise Vinvico JV will be organised according to the following divisions:

A. General Management (Project and Enterprise decisions)
B. Administration (Accounting and Personnel)
C. Production (Sparkling, Quality, Maintenance, Bottling)
D. Supplies (Labelling, Packaging and Storage)
E. Marketing (Provided by the G.M.)

According to the depicted structure, and taking into account the envisaged production programme, the plant capacity and the chosen technology, the following personnel structure will be employed:

n.1	Manager
n.2	Administrative clerks
n.1	Person in charge of technical aspects (technical manager)
n.1	Skilled mechanic
n.1	Skilled storeman
n.2	Skilled workers with forklift trucks
n.1	Skilled worker for pressurised vats managing.
n.3	Skilled workers for production line
n.4	Unskilled workers for production line

The Vinvaldo JV will employ a total of 16 persons.

7.2 Organisational design

The organisational structure of the Vinvaldo JV starts from the management.

Under the management control will lay the second level of Administration, Production, Supplies and Marketing.

The marketing will be controlled by the General Manager directly, since it is of the most importance in the JV strategy. The responsibility of this function will be shared with the Romanian personnel after the necessary training period.

The General Manager will co-ordinate the project and the enterprise following the marketing strategy mentioned in chapter II. He will be the responsible for the entrepreneurial functions and will organise and control all the divisions of the Vinvaldo JV.

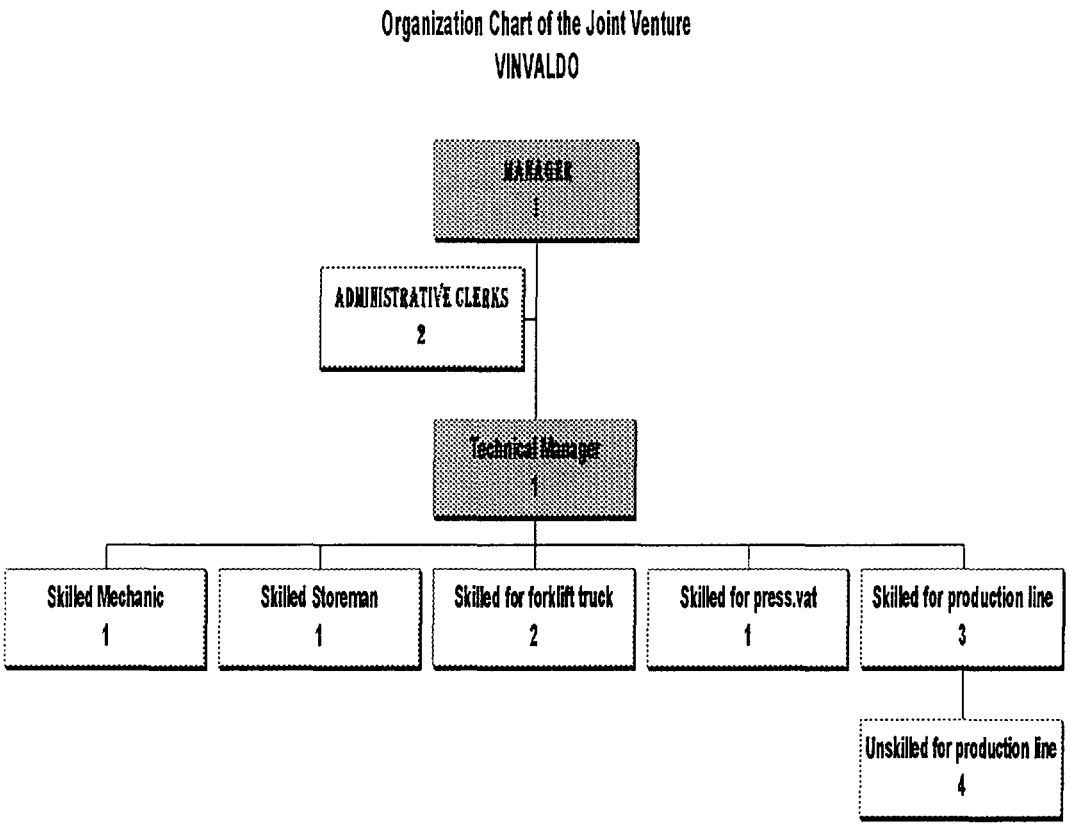
The Administrative Clerks will be in charge of the accounting and personnel control.

The Technical manager will be responsible for the control, technical and mechanical maintenance of the machinery. He will also co-ordinate the work of the mechanic.

The Skilled mechanic will execute the mechanical control and maintenance of the plant.

The Skilled storeman will be employed in storing and packaging bottles together with 2 Skilled workers with forklift trucks.

The Skilled worker will be in charge of the pressurised vats. The remaining Skilled workers and the Unskilled workers will be employed in the main plant of sparkling and bottling process.



Chapter 8. Human resources

8.1 Categories and functions

The human resources required in the Vinvaldo JV for the implementation and operation of the project can be identified in the following categories:

1. General Management, Organisation and Supervisory Staff, including marketing staff

2. Administrative Personnel

3. Production and storage workers

The organisational structure and the quantities required by Vinvaldo JV have already been described above.

It should be emphasised that the success of the project is highly linked to the quality of the management.

Along the study, it has been clearly understood that the local management experience is far lower than the Italian average standard. Therefore the employment of an Italian General Manager, to reinforce the critical issue of the company's ruling activities is strictly recommended.

8.2 Socio-economic and cultural environment

Romanian GNP, after an abrupt decline in 1990-92 (-27%), turned round in 1993 (+1.2%), then grew strongly in 1994 (+3.4%) and continued its positive trend in 1995. The most positive developments have been the on-going expansion of exports, an improvement in investment structure and the curbing of the inflation rate.

Romania has seen radical changes in the way its economy is organised. The people in Eastern Europe have certainly difficulties to understand the scope of the changes.

The people in Romania are still hoping a positive improvement of their living standard, but practically they suffered from a decrease in their conditions and purchasing power and had difficulties to perceive the end of their troubled period.

This perception certainly has a strong impact on the consumption of goods, the attitude towards the work, the organisation of society and the global efficiency of the system.

The political reforms and the political and economic support from the west are involved too. The trend of the changes is certainly very encouraging for any project regarding the high quality food market and the improvement of standard of life. The great uncertainty is to assess how fast the changes will take place.

Working people are used to be employed in very large factories and not to be in charge of correct deployment of the production operations.

The work policy had always privileged the general employment regardless to work quality. This can still be easily perceived in the factory visits.

Nevertheless, the younger people and some managers show an evident willingness to change the working system and organisation, having in great care the salary level.

Therefore, it will be possible to select the required quality personnel, but only applying the greatest care in the recruitment and management phases.

8.3 Training

The choice of people to be employed in the Vinvaldo JV is subject to the critical problem of the selection of the appropriated (and motivated) personnel among the over 350 units presently employed in Vinvico.

The new firm will utilise only 16 of them. The personnel will be selected among those already trained in working in cellar and bottling.

The person in charge of technical issues (enologist) will need a special training of 2-3 months about sparkling wine produced in western countries, especially at the Valdo plant in Italy.

No training is considered required for all the other members of the personnel.

8.6 Costs estimates

The following table reports the salary related costs. Costs are inclusive of 30% social charges and 25% taxes. The working days are 252 per year.

Categories	cost (LEI) /day
workman	14,300
skilled workman	22,000
clerk	27,5000
manager	49,500

Chapter 9. Implementation planning and budgeting

The whole implementation process has been divided into three phases:

1) Pre-investment phase

2) Investment phase

3) Operational phase.

The pre-investment phase started in march 1994, after a work visit in Romania by an IPO-UNIDO delegation to Romania in connection with the preparation of the international co-operation fair Boritec'94 in Milan.

By the end of 1994 the feasibility study was commissioned by the two counterparts to UNIDO, as mentioned in Chapter 2. A field survey was carried out in April 1995 in Costanta, visiting the VINVICO plant and the satellite farms.

The investment phase was planned to start by the end of 1995 with the negotiation and contracting to ensure the financial assets and subsequent restoration of the building, purchase and installation of machinery and equipment.

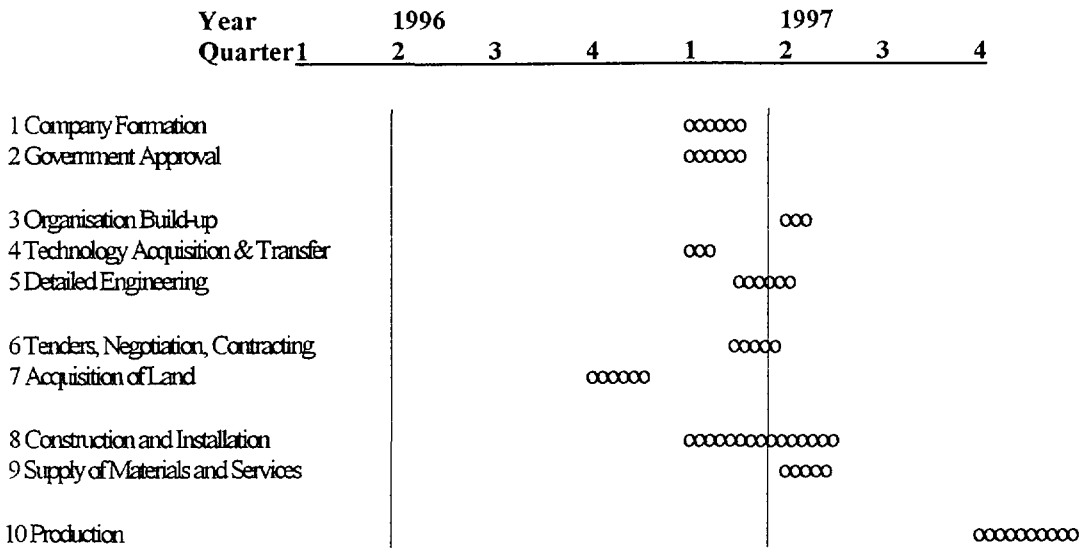
The construction period of the investment phase includes:

1) building (and site) restoration

2) installation of equipment

It will start in the second half of February 1996 and will last to the second half of June.

Implementation Planning Schedule



It has been prudentially forecast that, thorough 1996, 1/2 year pre-production period will be necessary for the constitution of the Joint Venture.

During 1996, the restoration of the building has been prudentially forecast to end before Summer in order to allow the actual beginning of the production in June/July.

During the investment and construction phases of the project, it would be advisable for the management to compose a project task consisting of staff members belonging to VINVICO, VINEXPORT and VALDISO, as well as major suppliers of machinery, carrying project specific responsibilities.

Many decisions, made by each partner, could imply a double responsibility, connected both with the formal delay of the organisation and with delay of project activities.

As far as the VINVALDO task team is concerned, the planned technical stages are not very critical, being possible to purchase the machinery from industrial suppliers in the position to provide full commissioning of the equipment. The whole stage will last no more than 2-3 months.

It is very important to underline that the initial JV agreement is likely subject to a misunderstanding, maybe due to the difference in the interpretation (or translation) of the signed Letter Of Intent.

As a matter of fact, according to the LOI the Romanian partner should provide the buildings, part of the machinery, labour, the raw materials, the management and administration facilities.

During the study team mission to Romania, the VINVICO President. Mr.Cojucaru announced that it is impossible for VINVICO to provide any part of the machinery. Especially, no use of the VINVICO bottling line for the production of the JV company is considered possible for two different reasons.

- First of all, the line is already completely utilised by the VINVICO potential production, and therefore cannot be available for different use.

- Secondarily, VINVICO can not bear any loan due to the 70% rate of interest requested by the financial institutions and Banks; furthermore, the applications of VINVICO for soft loans to the Ministry of Agriculture have already been rejected. Therefore there is no way to acquire additional machinery on the market from VINVICO side.

The Feasibility Study Team in Romania clearly realised the absolute lack of liquidity of VINVICO company: as a result, VINVICO could contribute to the capitalisation of the VINVALDO JV only with the capital value of the buildings.

Therefore, it should be considered carefully a realistic revision of the preliminary agreement statement by the parties, in order to define a concrete financial structure of the possible Joint Venture.

In the meantime, the present study is based on the initial agreement, and therefore the capital coverage is assumed in line with the Letter Of Intent.

Finally the COMFAR III Expert Software has been used to evaluate the present value of the JV's future cash flow discounted at the cost of capital.

A model without inflation is considered (real terms analysis) to examine the profitability of the industrial initiative independently from the general economic conditions. The calculations have been carried out using local currency (LEI) cash flows for product sales and for all payments which will take place on local basis, and finally discounting all cash flows at the calculated weighted rate of return.

10.3 Input Data

The following sections highlight the input data utilised for the COMFAR III calculations, as derived from the previous chapter of the present feasibility study (Chapt.2 - Chapt.9).

10.3.1 Pre-production and Fixed Investment Costs

Initial investment costs are defined as the sum of fixed assets (fixed investment costs plus pre-production expenditures) and current assets (net working capital). These costs will be met during the construction phase foreseen for the first 6 months of activity. The production phases starts on July 1st, 1996 and lasts for a further 10 years.

The fixed investment cost is estimated as 1,337,500 LEI in the construction phase, plus additional 99,750 LEI in the production phase.

Pre-production expenditures have been included in the investment costs.

As suggested by Italian machinery manufacturers, the technical life of these kind of fixed assets is around 5 years; thus a depreciation rate of no lower than 20%/yr. (straight-line method) has been selected. The present model includes a depreciation rate linear to zero.

Re = Rf + Risk premium over the market

In this case we have estimated the Re for the Romanian partner is about 15%, and that the Rf for the Italian partner is about 15% plus an Rf of approx. 10% (for a 10-year investment), thus the Italian Re equals 25%. In addition %D is 15%, at a cost Rd of 12%. Therefore the WACC is equal to 18% in our case.

FIXED INVESTMENTS COSTS AND PRE-PRODUCTION	Invest (LEI) in construct.	Invest (LEI) in product.	Depreciation rate (%)
site preparation & buildings	150,000	99,750	10%
plant machinery & equipment	1,103,500	0	20%
TOTAL INITIAL INVESTMENT (without Working Capital)	1,337,500	99,750	

10.3.2 Working Capital

Net Working Capital requirements have been calculated according to the expected minimum days of coverage (MDC) determined for the JV in a prudential estimation.

Local supplies contribute to stock for a 30 days, divided by wine, bottle, label and box.

Foreign raw materials account for a 30-day stock, divided by cork, metal wiring, and foil wrapper.

Utilities account for a 30-day stock, while energy is assumed to require a 15-day stock.

Work in progress has been estimated up to 20 days,

Finished products have been estimated to 10 days.

Similarly, as far as the accounts payable are concerned, no distinction was made in between local and foreign contributions, assuming a common delay in payment of 45 days. Factory overhead costs have been assumed delayed by 45 days, while the direct marketing costs of only 30 days.

The cash-in-hand part of the working capital was considered, equivalent to 10 days, to give the JV company the possibility to fulfil very short term requirements in case no delay was accepted.

The following table summarises the main input for working capital coverage (MDC, Minimum Days of Coverage):

Item	MDC
Raw Material (foreign sourced)	30
Raw Material (locally sourced)	30
Utilities	30
Energy	15
Work in Progress	20
Finished Products	10
Accounts Receivable	60
Cash in Hand	10
Accounts Payable (foreign source)	45
Account Payable (local source)	45
Account Payable (marketing)	30

The yearly average capital trapped in the company can be subsequently calculated.

The first year of production (first year, 6 months at full capacity) requires an additional increase of investment due to the working capital, estimated up to about 241,360 LEI, to be increased again of 35,260 LEI over the second, and reaching the final level of about 276,620 LEI.

As it will result, the net investment in WIC results in about 15.1.5% of the sales level.

10.3.3 Sources of Finance

The initial capital of the Joint Venture is contributed by the two partners' equity (up to 1,364,249 LEI) and two term loans for a total amount of 240,750 LEI.

The total amount of equity infusion is fixed at 1,364,249 LEI, provided by the partners with a share of 49% (668,482 LEI from the local Vinvico s.a. and 51% from the Italian Valdo Bolla (695,767 LEI).

Partner	Equity (LEI)	Share %
VINVICO s.a.	668,482	49
VALDO BOLLA Spa	695,767	51
TOTAL EQUITY	1,364,249	100

The total equity is considered paid in at the beginning of the activity (1/1996). The limited additional investments during the production phases

(99,750 LEI for equipment replacements) are supposed to be paid through the retained earnings of the JV company.

The distribution of total investment and financial coverage is as follows:

Investment vs. Sources of Capital	1996
Total fixed investment (LEI)	(1,337,500)
Increase in Working Capital (LEI)	(241,360)
TOTAL INVESTMENT	**1,578,860**
Equity contribution (LEI)	1,364,249
Term Loan (LEI)	240,750
TOTAL CAPITAL COVERAGE	**1,604,999**
Balance	26,139

Of course, the financial requirements for sustainable growth are covered by the borrowed capital during the first year of production. The profit obtained from the operations is sufficient to pay back the whole borrowed capital, as discussed in Chapter 10.4.2 about the Cash Flow for Financial Planning. As further discussed, the cash flow for financial planning states that the growth is effectively supported by inflow of finance.

10.3.4 Production Phase

The production phase is planned to start from 7/1996 (after 6 months of construction period), and to last 10 years.

The full capacity is reached from the second year. According to the Chapter.6 Engineering and Technology, the total capacity of the plant is reached at the level of 1,000,000 bottles/year.

Year	Produced Bottles (Export)	Produced bottles (Domestic)
1996	380,000	95,000
1997	800,000	200,000
2000	800,000	200,000
2001	800,000	200,000
2002	800,000	200,000
2003	800,000	200,000

The year 2000 was selected as reference year. In the present model, all the production is considered to be sold on yearly basis.

The reference price has been defined through the market study; it has been assumed that at the beginning the level will be of 1.6 LEI / bottle for the foreign market, while 2.75 LEI / bottle on the domestic market., and that the price remains unchanged over the whole planning horizon.

Year	1998	1999	2000	2001	2002
Export Price (LEI)	1.6	1.6	1.6	1.6	1.6
Domestic Price (LEI)	2.75	2.75	2.75	2.75	2.75

The unit cost of a bottle is affected by the list of raw materials, both local and foreign sourced. According to the indications of Chapter.4 Raw Materials and Supplies, the consumption can be synthesised according to the following table:

Sparkling Wine Bottle Direct Expenses	Unit cost (LEI)
white wine	470
bottle	310
label	20.4
box	127.5
cork	51.0
metal wiring	51.0
foil wrapper	61.2
TOTAL	1085.0

Sparkling Wine Bottle Indirect Expenses	Yearly cost (LEI)
Utilities	30,000,000
Energy	30,000,000
Maintenance	10,000,000
Factory Overheads	10,000,000

Cost of personnel is divided into different categories, and has been considered as direct fixed and indirect fixed costs.

Direct Personnel	year salary (LEI)	q.ty
Technical Head	6,930,000	1
Skilled	5,544,000	8
Unskilled	3,603,000	5

Indirect Personnel	year salary (LEI)	q.ty
Chairman	12,474,000	1
Clerical	6,930,000	2

10.3.5 Income Taxes

In the present study, an income tax of 35% was assumed, even though a foreign investment in Romania can benefit from fiscal incentives, such as tax holiday periods on income tax, withholding tax, dividend tax. The 35% assumption is a conservative position, being the JV fiscal position not yet stated by the local authorities.

10.4 Analysis of Results

10.4.1 Net Income Statement

The Net Income Statement schedule shows an increasing trend of sales from 869,250 LEI on the first production year (half year of construction) to 1,830,000 LEI from 1997 onwards.

The variable costs account for 565,280 LEI, about 65% of sales in the first year of production, and about 1,179,000 LEI onwards (same 64% of total sales).

The fixed costs account for 206,570 LEI (23.7% of total sales) in 1996, increasing to 413,000 (22.5% on total sales) from 1997 onwards.

As a consequence, the operational margin (total revenues less fixed and variable costs) amounts to about 11.2% on the first year, increasing to 11.7% in the following periods.

As the company does not pay very high interests with respect to the operational margin, the gross profit from operations accounts for about 97,410 LEI (first year) and 208,980 LEI (second year): it leads to about 11.4% of gross profit to total sales.

The Net Profit is positive since the very first year, starting from 63,310 LEI, and increasing up to about 135,830 LEI on the reference year (2000) corresponding to 7.6% of the total sales.

Part of the Net Profit generated in the first two years is utilised to finance the growth of business volume of the company (at regime on the second year), and therefore dividends could start being distributed partially from the third year. Such a distribution policy is an exclusive responsibility of the company management, and therefore the present analysis does not provide any comment on that. As a consequence, such parameters such as Net Present Value on Equity, and Liquidity ratios will not be considered at all.

The Net Profit to Equity ratio (ROE) shows a very limited trend to the remuneration of the equity capital invested. The sequence of values hardly reaches the limit of 10.7 on year 2000 (which is lower than the minimum required interest on the equity capital infused in the company, see footnote on WACC in Chap. 10.1) for the first 5 years, eventually reaching a more acceptable level of about 13.4 (2001) and definitively stabilising at 23.1% from 2002 onwards.

The trend can be easily understood from the Net Profit to Total Sales diagram (see Annex 1). As ROE should be compared with the equity return expectation of the partners, it be underlined that both the Romanian and the Italian partner's expectations are exceeded only after the completion of the repayment back of the debt service.

As far as the Return On Investment is concerned, the COMFAR III printout (see the Annex) shows that the ROI level starts lower than the level required by the debt service (12%), being calculated at 4.0% in 1996, and around 9.2% until the year 2000. After that, the ROI increases at a stable level of around 18%. The sequence confirms that the debt service (basically at 12%) would affect deeply the possibility of saving part of the margin for the investors' remuneration (or for future self-finance).

10.4.2 Cashflow for financial planning and profit distribution

The cashflow has been evaluated on both yearly basis and on periodical (monthly) basis. The results, as previously introduced, show that basically the equity infusion (1,364,000 LEI) together with the planned medium term

loan (240,750 LEI) permit the coverage of the initial fixed investment. In the reality the size of the loan cannot be fixed, but should be negotiated with the lending institute in order to obtain a certain elasticity, given the interest rate, with respect to possible overshooting of the capital expenditure during the construction.

The required term loan was assumed to have 5-year duration, 1 grace year, at the rate of 12%, which is basically a foreign oriented rate of interest. Such a rate has been selected taking into account the uncertainty of the credit condition in Romania, and therefore orienting the rate definition to an international level. As a consequence, the interest rate of 12% is intrinsically considering the exchange rate risk: it means that the interest actually paid per year should suffer an increase as high as the relative devaluation of the local currency with respect to the facial currency of the loan. Such an effect could lead very high the debt service. However, for the sake of simplicity, the economic conditions have been assumed stable for all the duration of the initiative, so that neither inflation nor exchange rate fluctuations have been taken into account.

The size of the loan was assumed according to the equity resources declared by the parties, as well as to setting-up a reasonable (with respect to the invested capitals) Debt Equity Ratio of about 0.17 (i.e. Equity 85%, Loan 15%). As a comment, it should be underlined that, given the limited amount of investment, a larger ratio would be hardly acceptable, and that an even lower one would be preferred by the potential lenders.

As made evident in the cash flow tables, at the beginning of the production period a further cash inflow is required to cover the investment for the creation of a working capital deposit. The term loan planned is (about) as large as the increase in the working capital, resulting at about 241,000 LEI.

The duration of the short loan has been studied to be as short as reasonably, given that the production plan would generate revenues in order to pay back that amount. A suitable period has been identified in 5 years. No additional loan inflow has seemed necessary. As shown in the COMFAR tables, at the end of 1999 the total cumulated cash largely exceeds the zero threshold, thus confirming the limited cash inflow needs.

In this way, the availability of cash is sufficient to cover the need for the beginning of the operations. The generated revenues sustains the production, cumulating an excess of cash as high as 220,790 LEI at the end of the first year. Therefore, the repayment of 240,000 LEI could be even anticipated, but has been intentionally left as long as 5 years to leave a limited financial leverage to the JV company.

Of course, in the reality, a certain recourse to the financial leverage will be introduced, under the control of the internal administrator. It is not the purpose of the present study give recommendations about the most effective financial daily management.

10.4.3 Discounted cashflow

The financial evaluation has been carried out assuming a basic reference configuration for the investment project, defined by the cost estimation summarised in the previous paragraphs. This basic version does not include any inflation rate. The related printouts are enclosed in the Annex 1 to the present study.

- Given the general assumptions of the project, the Net Present Value (NPV) over the project, calculated at 18% of discount rate, is positive (305,900 LEI), with a NPV ratio of 0.18 (i.e. the total cumulated net cash deriving from the operations is estimated 1.18 times higher than the total initial investment), which represent a fairly limited value. The evaluation still shows a positive result, even if with a limited margin over the threshold of decision (0 level).

- The internal rate of return over total investment IRR results a little higher than the hurdle rate (24.4%), which represents a calculated 6.4% spread over the required discount rate. Such a value is not very high with respect to usual industrial rates, especially if considering the possible fluctuations of profitability of real cases if compared with the theoretical study case (for example, long unpredictable interruptions in the production process can badly affect the production sold, thus resulting in a sudden drop of the indicator). Therefore a certain margin of profitability against possible risks should be taken into account.

- The dynamic payback period is calculated in 8 years; as clearly understood from the Net Income Statement analysis, the second part of the planning horizon operations is strictly mandatory for securing a good profitability to the whole enterprise. The reduction of the planning horizon (given the operating stated conditions) would force the NPV down, until getting a return lower than the hurdle rate of 18%. Therefore, the dynamic payback indicator is reporting of a medium-long term for the complete repayment of the invested capital. It should be clearly understood that, in case of advanced fault of the company, the term loans would be paid back in any case with priority (within the first 6 years); therefore, the equity remuneration would be forced even lower than the hurdle rate threshold.

10.4.4 Break-even Analysis

A break-even analysis was performed on this base case. First, costs were allocated according to their variable and direct cost contribution. All raw material, factory supplies, and other costs were considered completely variable. All other costs, including all personnel costs, were considered fixed.

The JV operation was determined to break-even when it reached abut 67.9% of its operating capacity, considered in steady state (i.e. 1997-2000).

The break-even shows a very positive results, confirming that the most relevant costs have a variable nature, while the fixed costs (personnel, administration,...) account only for a limited part of the total expenditure.

The annexed table and graph show how the break-even level results rather constant along the first 5 years, then increasing consistently the margin against the threshold (break-even minimum requirement decreases down to 25%) in the last 5 years of operations.

10.5 Sensitivity Analysis

10.5.1 Sensitivity Analysis: Assumptions

The Sensitivity Analysis was performed mainly on the predicted foreign market volume, being the foreign market assessment intrinsically the weakest of the project assumptions.

Furthermore, fluctuations of price, production costs and investment costs have been analysed.

10.5.2 Sensitivity Analysis: Financial Results

A first summary table is showing the analysis results in the case of foreign market volume fluctuations. All the other parameters have been considered stable.

Foreign Market Variations	0 %	- 10 %	- 20 %	- 30 %	- 40 %
Net Present Value (,000 LEI)	305.9	214.1	122.3	30.6	-61.1
IRR (%)	24.4	22.5	20.6	18.6	16.6

As a result, the project accepts a certain degree of flexibility against fluctuation in foreign sold volume, up to a limit of about 30-35 percent of decrease. It means that, until the foreign sales decrease down to 520,000 bottles per year, still the overall profitability of the projects stands over the hurdle rate. However, it should be clearly understood how the conclusion is linked to the absolute stability of all the other assumptions, such as planning horizon, production costs, price stability.

A second batch of sensitivity analysis is presented in the following table. Hereinafter, the fluctuations of price, production costs and investment expenditures are examined.

	Variation	NPV (,000 LEI)	IRR (%)
Base Case	-	330.9	24.4
Price	- 5 %	21.7	18.4
Price	- 10 %	-262.4	12.3
Production Costs	+ 5 %	88.9	19.8
Production Costs	+ 10 %	-128.1	15.3
Investment Expenditures	+ 20 %	94.1	19.7

As made evident from the calculations, even a slight decrease (less than 10%) of the market price would badly affect the overall result, forcing the NPV to negative. Being the total sales composed of local and foreign contributions, and particularly, being the foreign market dynamic hardly predictable, such an indication of sensitivity should be taken into consideration with the greatest attention while running the company.

Again, the production cost increase can affect the overall economic result as badly as in the case of price decline. An increase of 10% in production costs can force the NPV negative.
It is worth noticing that the total cost is split by a consistent, stable part (mostly materials and utilities), and by a more unstable part of labour. Labour cost accounts (at regime) only for about 6-7 percent of the total labour cost. Therefore, an increase by 10% of the total cost due exclusively to the most volatile part (i.e. labour) can happen if the labour cost increases three times. In the framework of a quickly changing economy such an effect should be carefully tracked during company's operations.

As far as the sensitivity to investment expenditures is concerned, it became clear that even an increase of 20% does not affect the profitability result. Therefore, an actual expenditure exceeding the total budget would not affect the NPV decision rationale. However, it should be strongly underlined that, on the opposite, an investment expenditure increase would force the need for additional cash infusion in the new company, thus introducing an additional element of risk. As a matter of fact, the present financial availability (as presented by the parties) would not permit additional increase in the capital coverage.

10.6 Conclusions

The financial evaluation has been carried out assuming a basic reference configuration for the investment project, defined by the cost estimation summarised in the previous paragraphs. This base case involves real costs and prices, with inflation not incorporated. The related printouts are enclosed in the Annex 1. The main considerations that can be pinpointed are the following:

i) Given the general assumptions of the project, the Net Present Value (NPV), calculated at 18% the discount rate, is positive (305,900 LEI), thus indicating that the industrial project provides a remuneration higher than required discount rate. The internal rate of return is 24.4%, which is 6.4 points higher than the hurdle rate of 18%.

iii) The Net Profit starts to show positive results from the first year of production (1997) with Net Profit stabilising at around 8% of sales. Net Profit reaches just over 135,830 LEI by the year 2000.

iv) The break-even point (about 68% of total capacity) shows a certsin limited flexibility of the project to unforeseen fluctuations of the revenues.

v) The sensitivity analysis shows a certain degree of strengthen of the project against fluctuations of foreign sales and investment capital expenditures, still maintaining a positive NPV. On the contrary, the project is highly sensitive to variations of price (less than 10% decrease) and production costs (less than 10% increase).

ANNEX 1

COMFAR PRINTOUT

Basic Version

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	final version: August 1996
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	279,00	279,00
TOTAL INVESTMENT COSTS	1.337,50	378,75	1.716,25

SUMMARY SHEET

OPERATING COSTS	628,09	1.314,64	1.314,64
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	761,84	1.593,69	1.334,59
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	771,84	1.603,69	1.344,59
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	97,41	226,31	485,41
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	97,41	226,31	485,41
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	97,41	226,31	485,41
Income (corporate) tax	34,09	79,21	169,90
NET PROFIT	63,31	147,10	315,52

RATIOS

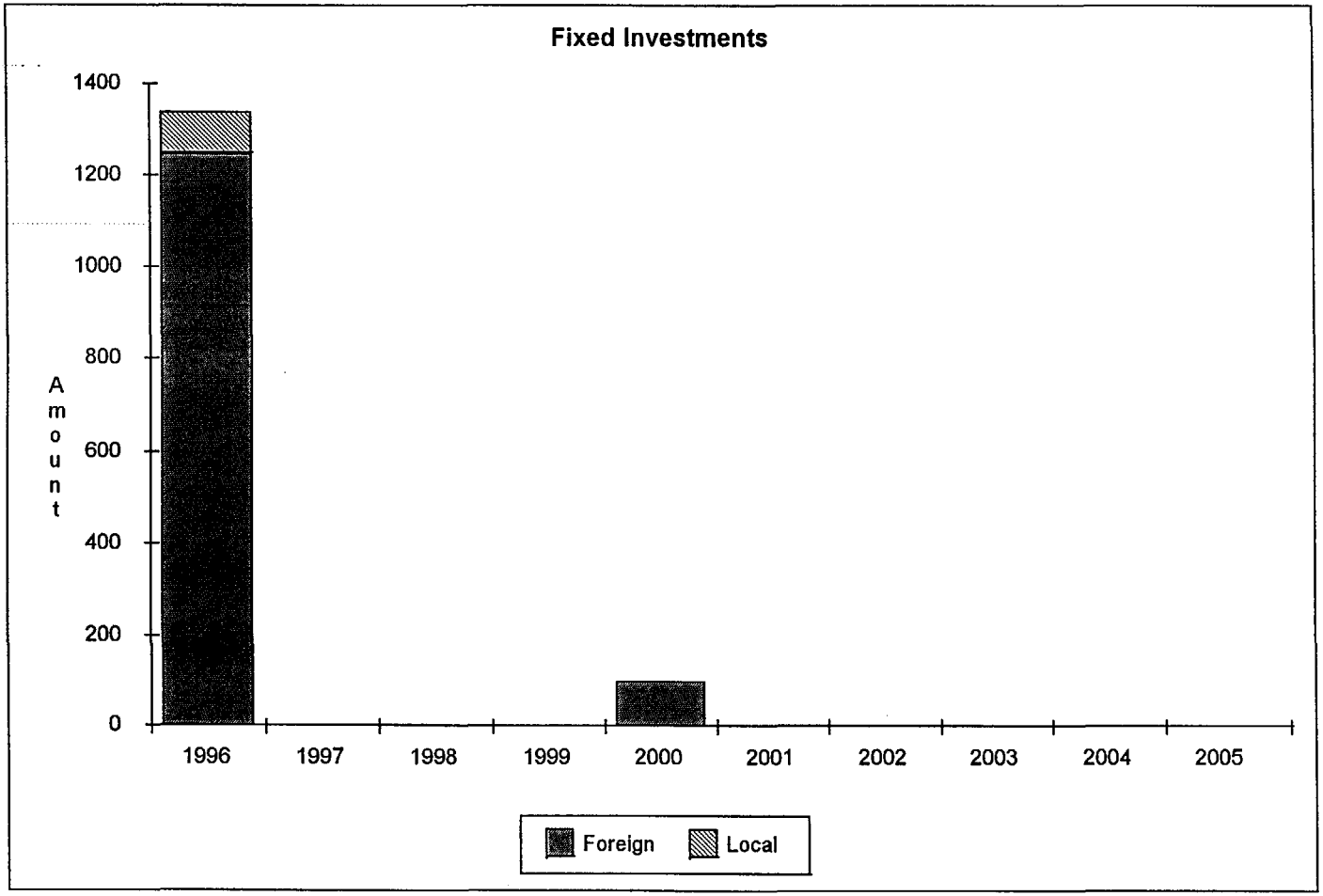
Net present value	at 18,00 %	305,90
Internal rate of return on investment (IRR)	24,42 %	
Modified IRR on investment	9,99 %	
Internal rate of return on equity (IRRE)	26,01 %	
Modified IRRE on equity	11,04 %	

FIXED INVESTMENT COSTS - TOTAL
ThousandLEI

	Total construction	Total production	1996	1997	1998	1999	2000	2001	2002
Land purchase	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Site preparation and development	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Civil works, structures and buildings	150,00	0,00	150,00	0,00	0,00	0,00	0,00	0,00	0,00
Plant machinery and equipment	1.103,75	99,75	1.103,75	0,00	0,00	0,00	99,75	0,00	0,00
Auxiliary and service plant equipment	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Environmental protection	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Incorporated fixed assets (project overheads)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Contingencies	83,75	0,00	83,75	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL FIXED INVESTMENT COSTS	1.337,50	99,75	1.337,50	0,00	0,00	0,00	99,75	0,00	0,00
Foreign share (%)	93,04	100,00	93,04	0,00	0,00	0,00	100,00	0,00	0,00

FIXED INVESTMENT COSTS - TOTAL
ThousandLEI

	2003	2004	2005
Land purchase	0,00	0,00	0,00
Site preparation and development	0,00	0,00	0,00
Civil works, structures and buildings	0,00	0,00	0,00
Plant machinery and equipment	0,00	0,00	0,00
Auxiliary and service plant equipment	0,00	0,00	0,00
Environmental protection	0,00	0,00	0,00
Incorporated fixed assets (project overheads)	0,00	0,00	0,00
Contingencies	0,00	0,00	0,00
TOTAL FIXED INVESTMENT COSTS	0,00	0,00	0,00
Foreign share (%)	0,00	0,00	0,00


Fixed Investments
1400
1200
1000
800
600
400
200
0
Amount
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
Foreign
Local

PRE-PRODUCTION EXPENDITURES - TOTAL
ThousandLEI

	Total construction	Total production	1996	1997	1998	1999	2000	2001
Pre-production expenditures (net of interest)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Interest	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL PRE-PRODUCTION EXPENDITURES	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Foreign share (%)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

PRE-PRODUCTION EXPENDITURES - TOTAL
ThousandLEI

	2002	2003	2004	2005
Pre-production expenditures (net of interest)	0,00	0,00	0,00	0,00
Interest	0,00	0,00	0,00	0,00
TOTAL PRE-PRODUCTION EXPENDITURES	0,00	0,00	0,00	0,00
Foreign share (%)	0,00	0,00	0,00	0,00

NET WORKING CAPITAL REQUIREMENTS - TOTAL
ThousandLEI

	Coefficient of turnover	1996	1997	1998	1999
Total inventory	0,00	207,05	208,45	208,22	208,22
Accounts receivable	0,00	212,70	220,77	220,77	220,77
Cash-in-hand	36,00	3,21	3,21	3,21	3,21
CURRENT ASSETS	0,00	422,96	432,43	432,20	432,20
Current liabilities					
Accounts payable	0,00	179,18	153,39	153,19	153,21
TOTAL NET WORKING CAPITAL REQUIREMENTS	0,00	243,77	279,04	279,01	279,00
INCREASE IN NET WORKING CAPITAL	0,00	243,77	35,26	-0,02	-0,02
Foreign share (%)	0,00	11,90	12,19	12,19	12,19

NET WORKING CAPITAL REQUIREMENTS - TOTAL
ThousandLEI

	2000	2001	2002	2003	2004
Total inventory	208,22	208,22	208,22	208,22	208,22
Accounts receivable	220,77	220,77	220,77	220,77	220,77
Cash-in-hand	3,21	3,21	3,21	3,21	3,21
CURRENT ASSETS	432,20	432,20	432,20	432,20	432,20
Current liabilities					
Accounts payable	153,21	153,21	153,21	153,21	153,21
TOTAL NET WORKING CAPITAL REQUIREMENTS	279,00	279,00	279,00	279,00	279,00
INCREASE IN NET WORKING CAPITAL	0,00	0,00	0,00	0,00	0,00
Foreign share (%)	12,19	12,19	12,19	12,19	12,19

NET WORKING CAPITAL REQUIREMENTS - TOTAL ThousandLEI	
	2005
Total inventory	208,22
Accounts receivable	220,77
Cash-in-hand	3,21
CURRENT ASSETS	432,20
Current liabilities	
Accounts payable	153,21
TOTAL NET WORKING CAPITAL REQUIREMENTS	279,00
INCREASE IN NET WORKING CAPITAL	0,00
Foreign share (%)	12,19

INVESTMENT COSTS - TOTAL
ThousandLEI

	Total construction	Total production	1996	1997	1998	1999	2000	2001
Total fixed investment costs	1.337,50	99,75	1.337,50	0,00	0,00	0,00	99,75	0,00
Total pre-production expenditures	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Increase in net working capital	0,00	279,00	243,77	35,26	-0,02	-0,02	0,00	0,00
TOTAL INVESTMENT COSTS	1.337,50	378,75	1.581,27	35,26	-0,02	-0,02	99,75	0,00
Foreign share (%)	93,04	35,31	80,53	14,17	13,96	13,96	100,00	0,00

INVESTMENT COSTS - TOTAL
ThousandLEI

	2002	2003	2004	2005
Total fixed investment costs	0,00	0,00	0,00	0,00
Total pre-production expenditures	0,00	0,00	0,00	0,00
Increase in net working capital	0,00	0,00	0,00	0,00
TOTAL INVESTMENT COSTS	0,00	0,00	0,00	0,00
Foreign share (%)	0,00	0,00	0,00	0,00

ANNUAL COSTS OF PRODUCTS - TOTAL
ThousandLEI

	Production 7/1996-12/1996	Production 1997	Production 1998	Production 1999	Production 2000	Production 2001	Production 2002
Capacity utilization (%)	100,28	100,14	100,00	100,00	100,00	100,00	100,00
Raw materials	571,08	1.140,58	1.139,00	1.139,00	1.139,00	1.139,00	1.139,00
Factory supplies	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Utilities	15,04	30,04	30,00	30,00	30,00	30,00	30,00
Energy	15,00	30,00	30,00	30,00	30,00	30,00	30,00
Spare parts consumed	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Repair, maintenance, material	5,00	10,00	10,00	10,00	10,00	10,00	10,00
Royalties	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Labour	47,82	95,64	95,64	95,64	95,64	95,64	95,64
Labour overhead costs (taxes etc.)	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Factory overhead costs	5,00	10,00	10,00	10,00	10,00	10,00	10,00
FACTORY COSTS	658,94	1.316,26	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64
Administrative costs	0,00	0,00	0,00	0,00	0,00	0,00	0,00
OPERATING COSTS	658,94	1.316,26	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64
Depreciation	133,75	267,50	267,50	267,50	267,50	153,70	19,95
Financial costs	0,00	28,89	23,11	17,33	11,56	5,78	0,00
TOTAL PRODUCTION COSTS	792,69	1.612,65	1.605,25	1.599,47	1.593,69	1.474,11	1.334,59
Direct marketing costs	10,00	10,00	10,00	10,00	10,00	10,00	10,00
COSTS OF PRODUCTS	802,69	1.622,65	1.615,25	1.609,47	1.603,69	1.484,11	1.344,59
Foreign share (%)	25,70	26,32	26,24	26,15	26,06	20,92	13,62
Variable share (%)	74,27	72,76	72,99	73,25	73,52	79,44	87,69

ANNUAL COSTS OF PRODUCTS - TOTAL
ThousandLEI

	Production 2003	Production 2004	Production 2005
Capacity utilization (%)	100,00	100,00	100,00
Raw materials	1.139,00	1.139,00	1.139,00
Factory supplies	0,00	0,00	0,00
Utilities	30,00	30,00	30,00
Energy	30,00	30,00	30,00
Spare parts consumed	0,00	0,00	0,00
Repair, maintenance, material	10,00	10,00	10,00
Royalties	0,00	0,00	0,00
Labour	95,64	95,64	95,64
Labour overhead costs (taxes etc.)	0,00	0,00	0,00
Factory overhead costs	10,00	10,00	10,00
FACTORY COSTS	1.314,64	1.314,64	1.314,64
Administrative costs	0,00	0,00	0,00
OPERATING COSTS	1.314,64	1.314,64	1.314,64
Depreciation	19,95	19,95	19,95
Financial costs	0,00	0,00	0,00
TOTAL PRODUCTION COSTS	1.334,59	1.334,59	1.334,59
Direct marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	1.344,59	1.344,59	1.344,59
Foreign share (%)	13,62	13,62	13,62
Variable share (%)	87,69	87,69	87,69

PRODUCTION AND SALES PROGRAMME - TOTAL
ThousandLEI

	Production 7/1996-12/1996	Production 1997	Production 1998	Production 1999	Production 2000	Production 2001	Production 2002	Production 2003
Stock brought forward	0,00	26.388,89	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78
Quantity produced	501.388,89	1.001.388,89	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00
Stock carried over	26.388,89	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78
Quantity sold	475.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00
Gross unit price (average)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Gross sales revenue	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Less sales tax	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Net sales revenue	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Subsidy	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
SALES REVENUE	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Foreign share (%)	69,95	69,95	69,95	69,95	69,95	69,95	69,95	69,95

ANNUAL COSTS OF PRODUCTS - TOTAL
ThousandLEI

	Production 2003	Production 2004	Production 2005
Capacity utilization (%)	100,00	100,00	100,00
Raw materials	1.139,00	1.139,00	1.139,00
Factory supplies	0,00	0,00	0,00
Utilities	30,00	30,00	30,00
Energy	30,00	30,00	30,00
Spare parts consumed	0,00	0,00	0,00
Repair, maintenance, material	10,00	10,00	10,00
Royalties	0,00	0,00	0,00
Labour	95,64	95,64	95,64
Labour overhead costs (taxes etc.)	0,00	0,00	0,00
Factory overhead costs	10,00	10,00	10,00
FACTORY COSTS	1.314,64	1.314,64	1.314,64
Administrative costs	0,00	0,00	0,00
OPERATING COSTS	1.314,64	1.314,64	1.314,64
Depreciation	19,95	19,95	19,95
Financial costs	0,00	0,00	0,00
TOTAL PRODUCTION COSTS	1.334,59	1.334,59	1.334,59
Direct marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	1.344,59	1.344,59	1.344,59
Foreign share (%)	13,62	13,62	13,62
Variable share (%)	87,69	87,69	87,69

PRODUCTION AND SALES PROGRAMME - TOTAL
ThousandLEI

	Production 7/1996-12/1996	Production 1997	Production 1998	Production 1999	Production 2000	Production 2001	Production 2002	Production 2003
Stock brought forward	0,00	26.388,89	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78
Quantity produced	501.388,89	1.001.388,89	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00
Stock carried over	26.388,89	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78	27.777,78
Quantity sold	475.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00	1.000.000,00
Gross unit price (average)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Gross sales revenue	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Less sales tax	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Net sales revenue	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Subsidy	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
SALES REVENUE	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Foreign share (%)	69,95	69,95	69,95	69,95	69,95	69,95	69,95	69,95

PRODUCTION AND SALES PROGRAMME - TOTAL
ThousandLEI

	Production 2004	Production 2005
Stock brought forward	27.777,78	27.777,78
Quantity produced	1.000.000,00	1.000.000,00
Stock carried over	27.777,78	27.777,78
Quantity sold	1.000.000,00	1.000.000,00
Gross unit price (average)	0,00	0,00
Gross sales revenue	1.830,00	1.830,00
Less sales tax	0,00	0,00
Net sales revenue	1.830,00	1.830,00
Subsidy	0,00	0,00
SALES REVENUE	1.830,00	1.830,00
Foreign share (%)	69,95	69,95

FINANCIAL FLOW - TOTAL
ThousandLEI

	Total inflow	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Scrap 2006
Equity capital	1.364,25	1.364,25	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Ordinary capital	1.364,25	1.364,25	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
VINVICO SpA	668,48	668,48	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
VALDO BOLLA SpA	695,77	695,77	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Equity shares	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Preference capital	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
VINVICO SpA	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
VALDO BOLLA SpA	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Equity shares	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Subsidies, grants	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Long-term loans	240,75	240,75	-48,15	-48,15	-48,15	-48,15	-48,15	0,00	0,00	0,00	0,00	0,00
Long-term loans-Foreign	122,78	122,78	-24,56	-24,56	-24,56	-24,56	-24,56	0,00	0,00	0,00	0,00	0,00
Long-term loans-Local	117,97	117,97	-23,59	-23,59	-23,59	-23,59	-23,59	0,00	0,00	0,00	0,00	0,00
TOTAL LONG-TERM FINANCE	1.605,00	1.605,00	-48,15	-48,15	-48,15	-48,15	-48,15	0,00	0,00	0,00	0,00	0,00
Total short-term loans	179,20	179,18	-25,79	-0,20	0,02	0,00	0,00	0,00	0,00	0,00	0,00	-153,21
TOTAL FINANCIAL FLOW	1.784,20	1.784,18	-73,94	-48,35	-48,13	-48,15	-48,15	0,00	0,00	0,00	0,00	-153,21
Foreign share (%)	47,22	47,22	37,87	50,84	51,01	51,00	51,00	0,00	0,00	0,00	0,00	13,32

DEBT SERVICE - TOTAL
ThousandLEI

	Total inflow	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Scrap 2006
Total long-term loans												
Disbursement	240,75	240,75	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Repayment	240,75	0,00	48,15	48,15	48,15	48,15	48,15	0,00	0,00	0,00	0,00	0,00
Debt balance	0,00	240,75	192,60	144,45	96,30	48,15	0,00	0,00	0,00	0,00	0,00	0,00
Exchange rate adjustments	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Capitalized interest	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Interest payable	86,67	0,00	28,89	23,11	17,33	11,56	5,78	0,00	0,00	0,00	0,00	0,00
Other financial costs	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total short-term loans												
Disbursement	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Repayment	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Debt balance	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exchange rate adjustments	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Capitalized interest	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Interest payable	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Other financial costs	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL DEBT SERVICE												
Disbursement	240,75	240,75	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Repayment	240,75	0,00	48,15	48,15	48,15	48,15	48,15	0,00	0,00	0,00	0,00	0,00
Debt balance	0,00	240,75	192,60	144,45	96,30	48,15	0,00	0,00	0,00	0,00	0,00	0,00
Exchange rate adjustments	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Capitalized interest	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Interest payable	86,67	0,00	28,89	23,11	17,33	11,56	5,78	0,00	0,00	0,00	0,00	0,00
Other financial costs	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

CASH FLOW FOR FINANCIAL PLANNING - TOTAL
ThousandLEI

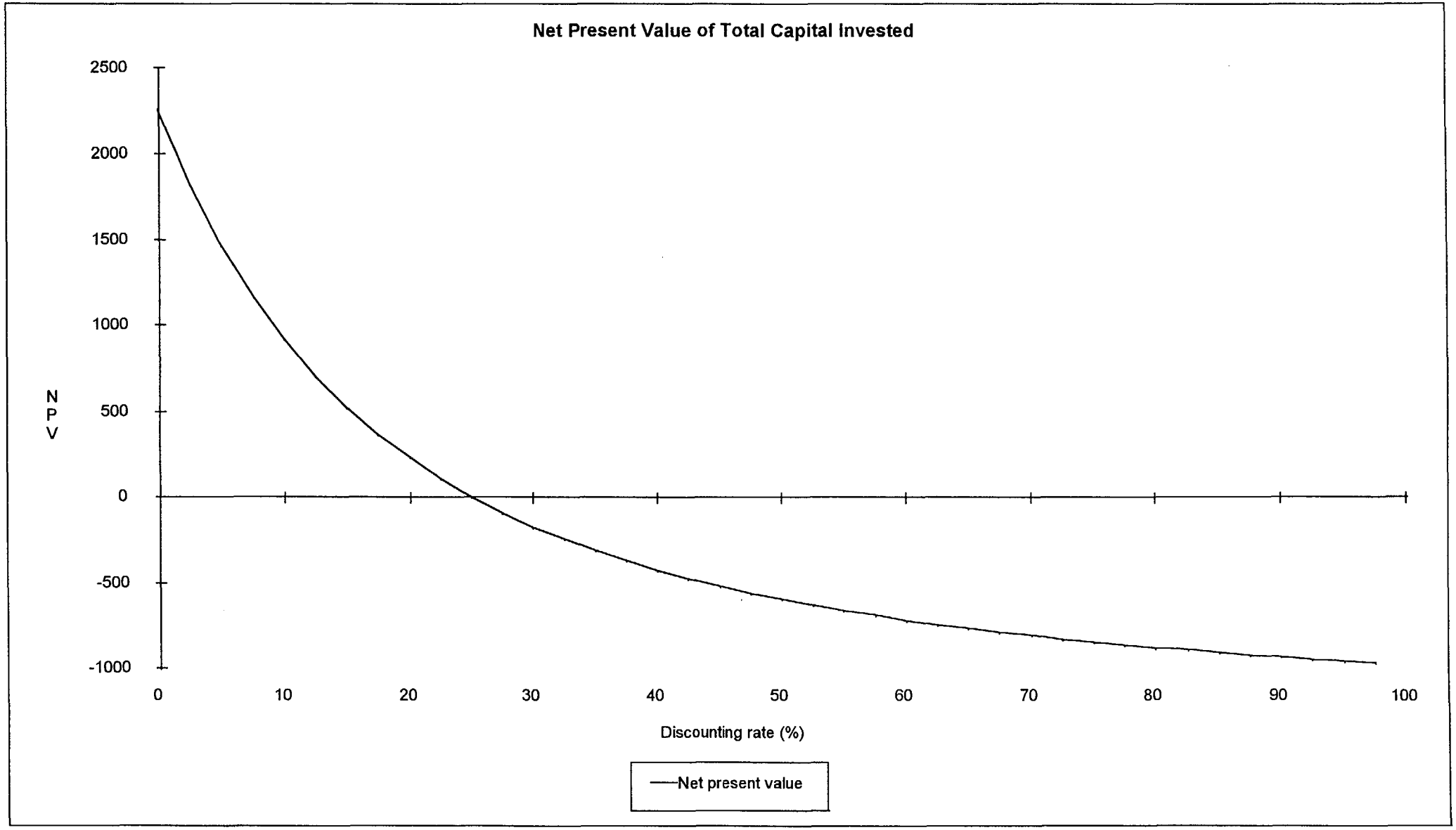
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Scrap 2006
TOTAL CASH INFLOW	2.653,43	1.830,00	1.830,00	1.830,02	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	432,20
Inflow funds	1.784,18	0,00	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Inflow operation	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	0,00
Other income	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	432,20
TOTAL CASH OUTFLOW	2.432,64	1.510,08	1.471,04	1.467,30	1.563,30	1.499,62	1.494,53	1.494,53	1.494,53	1.494,53	153,21
Increase in fixed assets	1.337,50	0,00	0,00	0,00	99,75	0,00	0,00	0,00	0,00	0,00	0,00
Increase in current assets	422,96	9,47	-0,23	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Operating costs	628,09	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	0,00
Marketing costs	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	0,00
Income (corporate) tax	34,09	73,14	75,16	77,19	79,21	121,06	169,90	169,90	169,90	169,90	0,00
Financial costs	0,00	28,89	23,11	17,33	11,56	5,78	0,00	0,00	0,00	0,00	0,00
Loan repayment	0,00	73,94	48,35	48,15	48,15	48,15	0,00	0,00	0,00	0,00	153,21
Dividends	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Equity capital refund	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
SURPLUS (DEFICIT)	220,79	319,92	358,96	362,71	266,70	330,38	335,47	335,47	335,47	335,47	279,00
CUMULATIVE CASH BALANCE	220,79	540,71	899,67	1.262,39	1.529,09	1.859,46	2.194,93	2.530,40	2.865,87	3.201,34	3.480,34
Foreign surplus (deficit)	75,62	1.072,51	1.080,46	1.083,41	986,60	1.089,30	1.116,80	1.116,80	1.116,80	1.116,80	34,00
Local surplus (deficit)	145,17	-752,59	-721,50	-720,69	-719,90	-758,92	-781,33	-781,33	-781,33	-781,33	245,00
Foreign cumulative cash balance	75,62	1.148,13	2.228,59	3.312,00	4.298,60	5.387,90	6.504,70	7.621,50	8.738,30	9.855,10	9.889,10
Local cumulative cash balance	145,17	-607,42	-1.328,92	-2.049,61	-2.769,51	-3.528,43	-4.309,76	-5.091,09	-5.872,42	-6.653,75	-6.408,76
Net flow of funds	1.784,18	-102,83	-71,46	-65,47	-59,71	-53,93	0,00	0,00	0,00	0,00	-153,21

DISCOUNTED CASH FLOW - TOTAL CAPITAL INVESTED
ThousandLEI

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
TOTAL CASH INFLOW	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Inflow operation	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Other income	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL CASH OUTFLOW	2.253,46	1.433,04	1.399,78	1.401,80	1.503,59	1.445,70	1.494,53	1.494,53	1.494,53	1.494,53
Increase in fixed assets	1.337,50	0,00	0,00	0,00	99,75	0,00	0,00	0,00	0,00	0,00
Increase in net working capital	243,77	35,26	-0,02	-0,02	0,00	0,00	0,00	0,00	0,00	0,00
Operating costs	628,09	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64	1.314,64
Marketing costs	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Income (corporate) tax	34,09	73,14	75,16	77,19	79,21	121,06	169,90	169,90	169,90	169,90
NET CASH FLOW	-1.384,21	396,96	430,22	428,20	326,41	384,30	335,47	335,47	335,47	335,47
CUMULATIVE NET CASH FLOW	-1.384,21	-987,25	-557,02	-128,83	197,58	581,88	917,35	1.252,82	1.588,29	1.923,76
Net present value	-1.384,21	336,41	308,98	260,61	168,36	167,98	124,27	105,31	89,25	75,63
Cumulative net present value	-1.384,21	-1.047,80	-738,82	-478,21	-309,85	-141,87	-17,60	87,71	176,96	252,60
NET PRESENT VALUE	at 18,00 %	305,90								
INTERNAL RATE OF RETURN	24,42 %									
MODIFIED INTERNAL RATE OF RETURN	9,99 %									
NORMAL PAYBACK	at 0,00 %	5 years								
DYNAMIC PAYBACK	at 18,00 %	8 years								
NPV RATIO	0,18									

DISCOUNTED CASH FLOW - TOTAL CAPITAL INVESTED
ThousandLEI

	Scrap 2006
TOTAL CASH INFLOW	279,00
Inflow operation	0,00
Other income	279,00
TOTAL CASH OUTFLOW	0,00
Increase in fixed assets	0,00
Increase in net working capital	0,00
Operating costs	0,00
Marketing costs	0,00
Income (corporate) tax	0,00
NET CASH FLOW	279,00
CUMULATIVE NET CASH FLOW	2.202,76
Net present value	53,31
Cumulative net present value	305,90
NET PRESENT VALUE	
INTERNAL RATE OF RETURN	
MODIFIED INTERNAL RATE OF RETURN	
NORMAL PAYBACK	
DYNAMIC PAYBACK	
NPV RATIO	


Net Present Value of Total Capital Invested
2500
2000
1500
1000
500
0
-500
-1000
N
P
V
0
10
20
30
40
50
60
70
80
90
100
Discounting rate (%)
Net present value

NET INCOME STATEMENT
ThousandLEI

	Production 7/1996-12/1996	Production 1997	Production 1998	Production 1999	Production 2000	Production 2001
Sales revenue	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Less variable costs	565,28	1.179,00	1.179,00	1.179,00	1.179,00	1.179,00
Material	555,28	1.169,00	1.169,00	1.169,00	1.169,00	1.169,00
Personnel	0,00	0,00	0,00	0,00	0,00	0,00
Marketing (except personnel)	10,00	10,00	10,00	10,00	10,00	10,00
Other variable costs	0,00	0,00	0,00	0,00	0,00	0,00
VARIABLE MARGIN	303,98	651,00	651,00	651,00	651,00	651,00
in % of sales revenue	34,97	35,57	35,57	35,57	35,57	35,57
Less fixed costs	206,57	413,14	413,14	413,14	413,14	299,34
Material	15,00	30,00	30,00	30,00	30,00	30,00
Personnel	47,82	95,64	95,64	95,64	95,64	95,64
Marketing (except personnel)	0,00	0,00	0,00	0,00	0,00	0,00
Depreciation	133,75	267,50	267,50	267,50	267,50	153,70
Other fixed costs	10,00	20,00	20,00	20,00	20,00	20,00
OPERATIONAL MARGIN	97,41	237,87	237,87	237,87	237,87	351,66
in % of sales revenue	11,21	13,00	13,00	13,00	13,00	19,22
Interest on short-term deposits	0,00	0,00	0,00	0,00	0,00	0,00
Financial costs	0,00	28,89	23,11	17,33	11,56	5,78
GROSS PROFIT FROM OPERATIONS	97,41	208,98	214,75	220,53	226,31	345,89
in % of sales revenue	11,21	11,42	11,74	12,05	12,37	18,90
Extraordinary income	0,00	0,00	0,00	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00	0,00	0,00	0,00
GROSS PROFIT	97,41	208,98	214,75	220,53	226,31	345,89

NET INCOME STATEMENT
TH. LEI

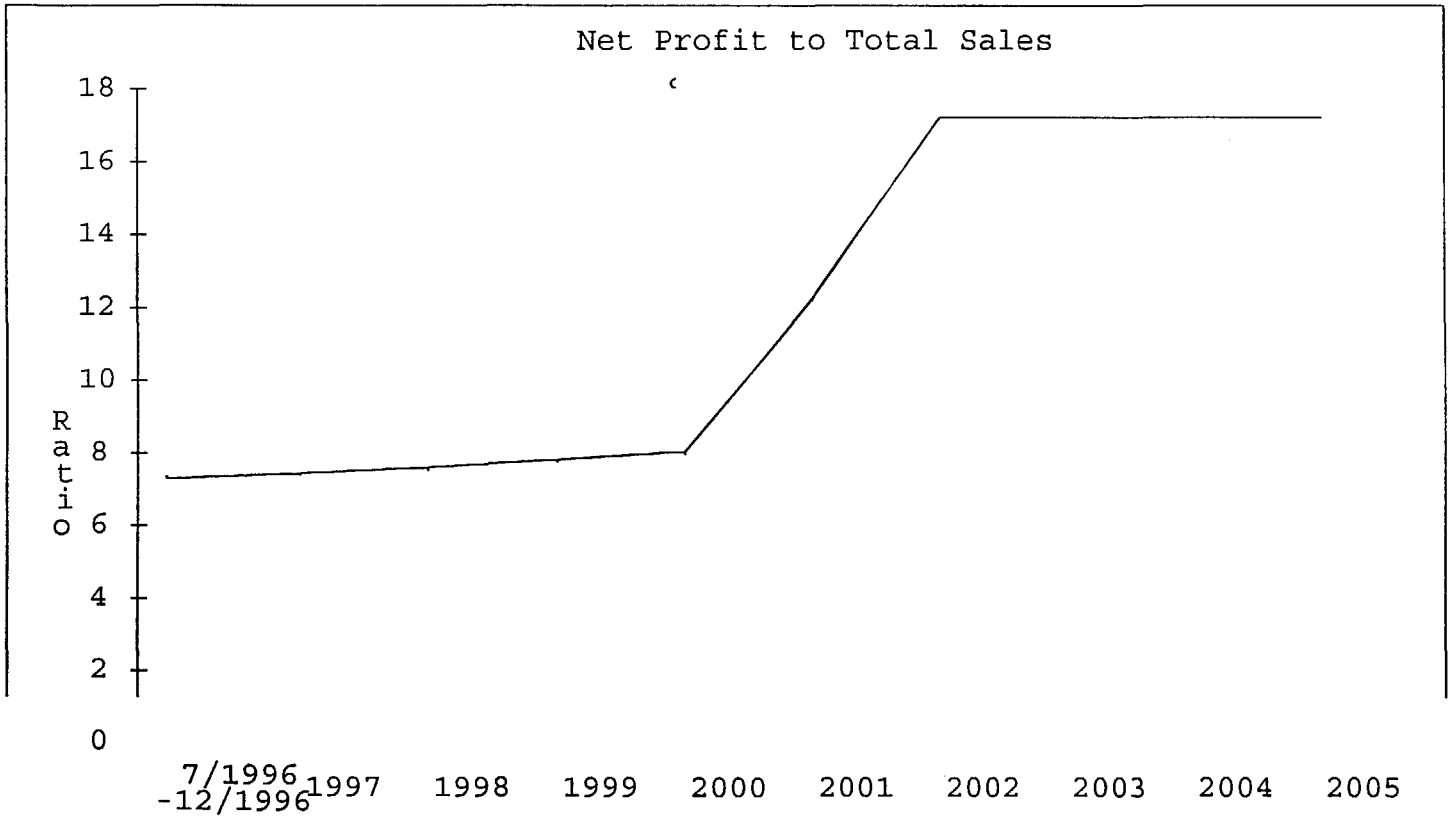
	Production 2002	Production 2003	Production 2004	Production 2005
Sales revenue	1.830,00	1.830,00	1.830,00	1.830,00
Less variable costs	1.179,00	1.179,00	1.179,00	1.179,00
Material	1.169,00	1.169,00	1.169,00	1.169,00
Personnel	0,00	0,00	0,00	0,00
Marketing (except personnel)	10,00	10,00	10,00	10,00
Other variable costs	0,00	0,00	0,00	0,00
VARIABLE MARGIN	651,00	651,00	651,00	651,00
in % of sales revenue	35,57	35,57	35,57	35,57
Less fixed costs	165,59	165,59	165,59	165,59
Material	30,00	30,00	30,00	30,00
Personnel	95,64	95,64	95,64	95,64
Marketing (except personnel)	0,00	0,00	0,00	0,00
Depreciation	19,95	19,95	19,95	19,95
Other fixed costs	20,00	20,00	20,00	20,00
OPERATIONAL MARGIN	485,41	485,41	485,41	485,41
in % of sales revenue	26,53	26,53	26,53	26,53
Interest on short-term deposits	0,00	0,00	0,00	0,00
Financial costs	0,00	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	485,41	485,41	485,41	485,41
in % of sales revenue	26,53	26,53	26,53	26,53
Extraordinary income	0,00	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00	0,00
GROSS PROFIT	485,41	485,41	485,41	485,41

NET INCOME STATEMENT
ThousandLEI

	Production 7/1996-12/1996	Production 1997	Production 1998	Production 1999	Production 2000	Production 2001
Investment allowances	0,00	0,00	0,00	0,00	0,00	0,00
TAXABLE PROFIT	97,41	208,98	214,75	220,53	226,31	345,89
Income (corporate) tax	34,09	73,14	75,16	77,19	79,21	121,06
NET PROFIT	63,31	135,83	139,59	143,35	147,10	224,83
in % of sales revenue	7,28	7,42	7,63	7,83	8,04	12,29
Dividends	0,00	0,00	0,00	0,00	0,00	0,00
RETAINED PROFIT	63,31	135,83	139,59	143,35	147,10	224,83
Ratios (%)						
Net profit to equity	4,64	9,96	10,23	10,51	10,78	16,48
Net profit to net worth	4,44	8,69	8,20	7,76	7,38	10,14
Net profit+interest to investment	4,00	10,19	10,06	9,94	9,24	13,44

NET INCOME STATEMENT
ThousandLEI

	Production 2002	Production 2003	Production 2004	Production 2005
Investment allowances	0,00	0,00	0,00	0,00
TAXABLE PROFIT	485,41	485,41	485,41	485,41
Income (corporate) tax	169,90	169,90	169,90	169,90
NET PROFIT	315,52	315,52	315,52	315,52
in % of sales revenue	17,24	17,24	17,24	17,24
Dividends	0,00	0,00	0,00	0,00
RETAINED PROFIT	315,52	315,52	315,52	315,52
Ratios (%)				
Net profit to equity	23,13	23,13	23,13	23,13
Net profit to net worth	12,45	11,07	9,97	9,07
Net profit+interest to investment	18,38	18,38	18,38	18,38



Net profit to sales

PROJECTED BALANCE SHEET
ThousandLEI

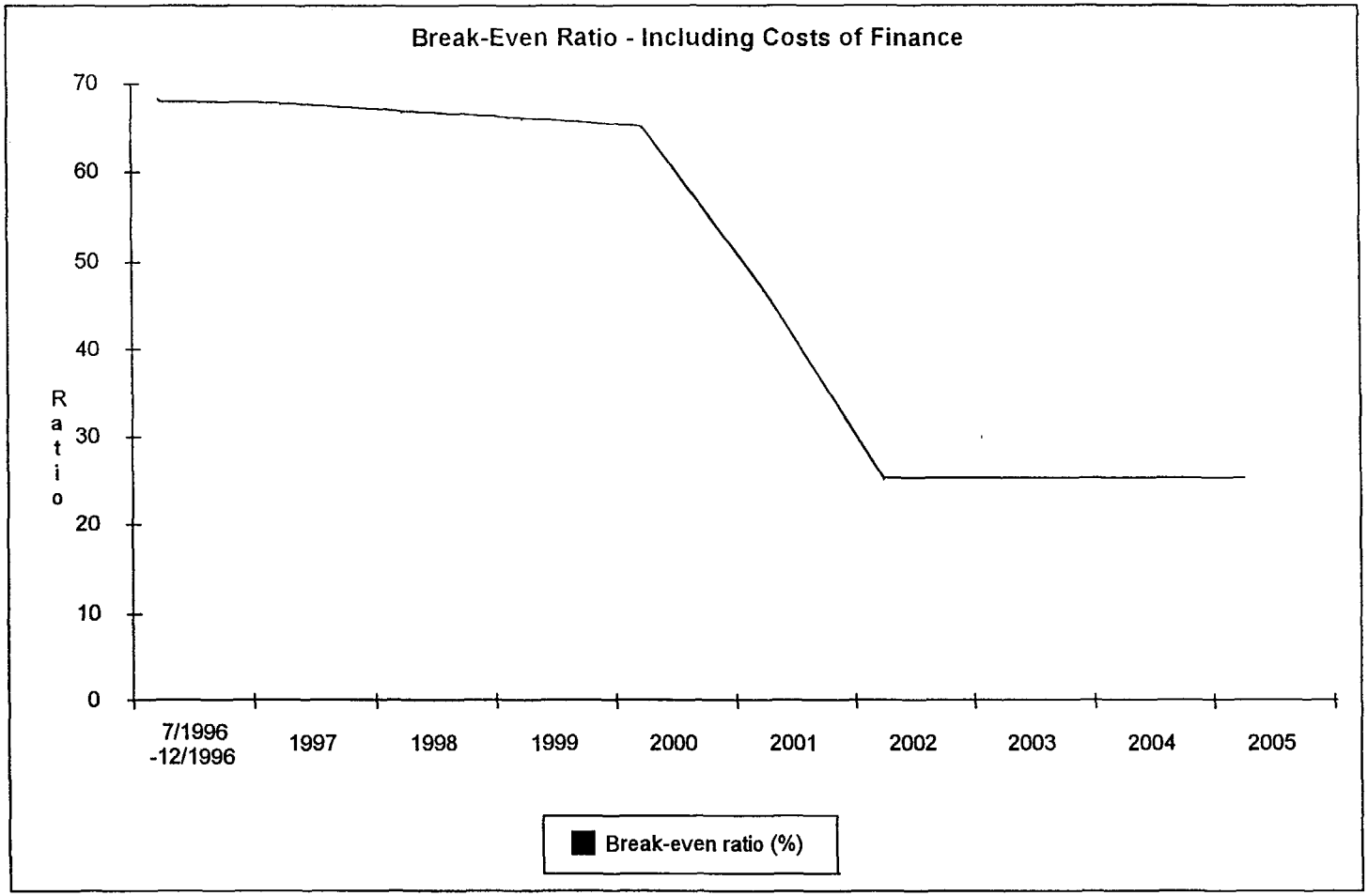
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
TOTAL ASSETS	1.847,50	1.909,39	2.000,63	2.095,84	2.194,79	2.371,47	2.686,99	3.002,51	3.318,03	3.633,55
Total current assets	643,75	973,14	1.331,88	1.694,59	1.961,29	2.291,67	2.627,14	2.962,61	3.298,08	3.633,55
Total fixed assets, net of depreciation	1.203,75	936,25	668,75	401,25	233,50	79,80	59,85	39,90	19,95	0,00
Accumulated losses brought forward	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Loss in current year	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL LIABILITIES	1.847,50	1.909,39	2.000,63	2.095,84	2.194,79	2.371,47	2.686,99	3.002,51	3.318,03	3.633,55
Total current liabilities	179,18	153,39	153,19	153,21	153,21	153,21	153,21	153,21	153,21	153,21
Total long-term loans	240,75	192,60	144,45	96,30	48,15	0,00	0,00	0,00	0,00	0,00
Total equity	1.364,25	1.364,25	1.364,25	1.364,25	1.364,25	1.364,25	1.364,25	1.364,25	1.364,25	1.364,25
Reserves, retained profit brought forward	0,00	63,31	199,15	338,74	482,08	629,18	854,01	1.169,53	1.485,05	1.800,57
Net profit after tax	63,31	135,83	139,59	143,35	147,10	224,83	315,52	315,52	315,52	315,52
Net worth	1.427,56	1.563,40	1.702,99	1.846,33	1.993,43	2.218,26	2.533,78	2.849,30	3.164,82	3.480,34
Ratios (%)										
Equity to total liabilities	73,84	71,45	68,19	65,09	62,16	57,53	50,77	45,44	41,12	37,55
Net worth to total liabilities	77,27	81,88	85,12	88,10	90,83	93,54	94,30	94,90	95,38	95,78
Long-term debt to net worth	0,17	0,12	0,08	0,05	0,02	0,00	0,00	0,00	0,00	0,00
Current assets to current liabilities	3,59	6,34	8,69	11,06	12,80	14,96	17,15	19,34	21,53	23,72

BREAK-EVEN ANALYSIS - TOTAL
ThousandLEI

	Production 7/1996-12/1996	Production 1997	Production 1998	Production 1999	Production 2000	Production 2001	Production 2002	Production 2003
Sales revenue	869,25	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00	1.830,00
Variable costs	565,28	1.179,00	1.179,00	1.179,00	1.179,00	1.179,00	1.179,00	1.179,00
Variable margin	303,98	651,00	651,00	651,00	651,00	651,00	651,00	651,00
Variable margin ratio (%)	34,97	35,57	35,57	35,57	35,57	35,57	35,57	35,57
Including cost of finance								
Fixed costs	206,57	413,14	413,14	413,14	413,14	299,34	165,59	165,59
Financial costs	0,00	28,89	23,11	17,33	11,56	5,78	0,00	0,00
Break-even sales value	590,70	1.242,56	1.226,32	1.210,07	1.193,83	857,69	465,47	465,47
Break-even ratio (%)	67,96	67,90	67,01	66,12	65,24	46,87	25,44	25,44
Fixed costs coverage ratio	1,47	1,47	1,49	1,51	1,53	2,13	3,93	3,93
Excluding cost of finance								
Fixed costs	206,57	413,14	413,14	413,14	413,14	299,34	165,59	165,59
Break-even sales value	590,70	1.161,35	1.161,35	1.161,35	1.161,35	841,45	465,47	465,47
Break-even ratio (%)	67,96	63,46	63,46	63,46	63,46	45,98	25,44	25,44
Fixed costs coverage ratio	1,47	1,58	1,58	1,58	1,58	2,17	3,93	3,93

BREAK-EVEN ANALYSIS - TOTAL
ThousandLEI

	Production 2004	Production 2005
Sales revenue	1.830,00	1.830,00
Variable costs	1.179,00	1.179,00
Variable margin	651,00	651,00
Variable margin ratio (%)	35,57	35,57
Including cost of finance		
Fixed costs	165,59	165,59
Financial costs	0,00	0,00
Break-even sales value	465,47	465,47
Break-even ratio (%)	25,44	25,44
Fixed costs coverage ratio	3,93	3,93
Excluding cost of finance		
Fixed costs	165,59	165,59
Break-even sales value	465,47	465,47
Break-even ratio (%)	25,44	25,44
Fixed costs coverage ratio	3,93	3,93


Break-Even Ratio - Including Costs of Finance
70
60
50
40
30
20
10
0
Ratio
7/1996
-12/1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
Break-even ratio (%)

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: price reduction 5%
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	279,00	279,00
TOTAL INVESTMENT COSTS	1.337,50	378,75	1.716,25

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	179,20
TOTAL SOURCES OF FINANCE	1.784,20

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	825,79	1.738,50	1.738,50
Factory costs	628,09	1.314,64	1.314,64
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	628,09	1.314,64	1.314,64
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	761,84	1.593,69	1.334,59
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	771,84	1.603,69	1.344,59
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	53,95	134,81	393,91
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	53,95	134,81	393,91
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	53,95	134,81	393,91
Income (corporate) tax	18,88	47,18	137,87
NET PROFIT	35,06	87,63	256,04

RATIOS

Net present value	at 18,00 %	21,73
Internal rate of return on investment (IRR)	18,46 %	
Modified IRR on investment	8,01 %	
Internal rate of return on equity (IRRE)	19,24 %	
Modified IRRE on equity	8,80 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: price reduction 10%
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	Italian Lira

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	279,00	279,00
TOTAL INVESTMENT COSTS	1.337,50	378,75	1.716,25

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	179,20
TOTAL SOURCES OF FINANCE	1.784,20

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	782,33	1.647,00	1.647,00
Factory costs	628,09	1.314,64	1.314,64
Administrative overhead costs	0,00	0,00	0,00
OPERATING COSTS	628,09	1.314,64	1.314,64
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	761,84	1.593,69	1.334,59

SUMMARY SHEET

Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	771,84	1.603,69	1.344,59
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	10,48	43,31	302,41
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	10,48	43,31	302,41
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	10,48	43,31	302,41
Income (corporate) tax	3,67	15,16	105,85
NET PROFIT	6,81	28,15	196,57

RATIOS

Net present value	at 18,00 %	-262,44
Internal rate of return on investment (IRR)	12,38 %	
Modified IRR on investment	5,74 %	
Internal rate of return on equity (IRRE)	12,42 %	
Modified IRRE on equity	6,20 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: production cost increase 5%
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	292,95	292,95
TOTAL INVESTMENT COSTS	1.337,50	392,70	1.730,20

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	188,16
TOTAL SOURCES OF FINANCE	1.793,16

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	869,25	1.830,00	1.830,00
Factory costs	659,50	1.380,37	1.380,37
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	659,50	1.380,37	1.380,37
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	793,25	1.659,42	1.400,32
Marketing costs	10,50	10,50	10,50
COSTS OF PRODUCTS	803,75	1.669,92	1.410,82
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	65,50	160,08	419,18
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	65,50	160,08	419,18
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	65,50	160,08	419,18
Income (corporate) tax	22,93	56,03	146,71
NET PROFIT	42,58	104,05	272,47

RATIOS

Net present value	at 18,00 %	88,90
Internal rate of return on investment (IRR)	19,85 %	
Modified IRR on investment	8,53 %	
Internal rate of return on equity (IRRE)	20,80 %	
Modified IRRE on equity	9,38 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	final version: August 1996 production cost increase 10%
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	306,90	306,90
TOTAL INVESTMENT COSTS	1.337,50	406,65	1.744,14

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	197,12
TOTAL SOURCES OF FINANCE	1.802,12

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	869,25	1.830,00	1.830,00
Factory costs	690,90	1.446,10	1.446,10
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	690,90	1.446,10	1.446,10
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	824,65	1.725,15	1.466,05
Marketing costs	11,00	11,00	11,00
COSTS OF PRODUCTS	835,65	1.736,15	1.477,05
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	33,60	93,85	352,95
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	33,60	93,85	352,95
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	33,60	93,85	352,95
Income (corporate) tax	11,76	32,85	123,53
NET PROFIT	21,84	61,00	229,42

RATIOS

Net present value	at 18,00 %	-128,10
Internal rate of return on investment (IRR)	15,34 %	
Modified IRR on investment	6,94 %	
Internal rate of return on equity (IRRE)	15,72 %	
Modified IRRE on equity	7,57 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: investment expenditure increase 20%
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.605,00	119,70	1.724,70
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	279,00	279,00
TOTAL INVESTMENT COSTS	1.605,00	398,70	2.003,70

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	216,55
TOTAL SOURCES OF FINANCE	1.821,55

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	869,25	1.830,00	1.830,00
Factory costs	628,09	1.314,64	1.314,64
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	628,09	1.314,64	1.314,64
Depreciation	160,50	321,00	23,94
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	788,59	1.647,19	1.338,58
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	798,59	1.657,19	1.348,58
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	70,66	172,81	481,42
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	70,66	172,81	481,42
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	70,66	172,81	481,42
Income (corporate) tax	24,73	60,48	168,50
NET PROFIT	45,93	112,33	312,93

RATIOS

Net present value	at 18,00 %	94,19
Internal rate of return on investment (IRR)	19,72 %	
Modified IRR on investment	8,34 %	
Internal rate of return on equity (IRRE)	20,52 %	
Modified IRRE on equity	9,04 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: foreign sales decrease 10%
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	259,51	259,51
TOTAL INVESTMENT COSTS	1.337,50	359,26	1.696,76

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	165,52
TOTAL SOURCES OF FINANCE	1.770,52

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	808,45	1.702,00	1.702,00
Factory costs	583,67	1.221,12	1.221,12
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	583,67	1.221,12	1.221,12
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	717,42	1.500,17	1.241,07
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	727,42	1.510,17	1.251,07
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	81,03	191,83	450,93
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	81,03	191,83	450,93
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	81,03	191,83	450,93
Income (corporate) tax	28,36	67,14	157,83
NET PROFIT	52,67	124,69	293,11

RATIOS

Net present value	at 18,00 %	214,14
Internal rate of return on investment (IRR)	22,57 %	
Modified IRR on investment	9,35 %	
Internal rate of return on equity (IRRE)	23,93 %	
Modified IRRE on equity	10,33 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: foreign sales decrease 20% (volume)
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	240,03	240,03
TOTAL INVESTMENT COSTS	1.337,50	339,78	1.677,28

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	151,84
TOTAL SOURCES OF FINANCE	1.756,84

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	747,65	1.574,00	1.574,00
Factory costs	539,25	1.127,60	1.127,60
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	539,25	1.127,60	1.127,60
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	673,00	1.406,65	1.147,55
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	683,00	1.416,65	1.157,55
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	64,65	157,35	416,45
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	64,65	157,35	416,45
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	64,65	157,35	416,45
Income (corporate) tax	22,63	55,07	145,76
NET PROFIT	42,02	102,28	270,70

RATIOS

Net present value	at 18,00 %	122,38
Internal rate of return on investment (IRR)	20,66 %	
Modified IRR on investment	8,67 %	
Internal rate of return on equity (IRRE)	21,77 %	
Modified IRRE on equity	9,57 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: foreign sales decrease 30% (volume)
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	220,55	220,55
TOTAL INVESTMENT COSTS	1.337,50	320,30	1.657,80

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	138,17
TOTAL SOURCES OF FINANCE	1.743,17

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	686,85	1.446,00	1.446,00
Factory costs	494,83	1.034,08	1.034,08
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	494,83	1.034,08	1.034,08
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	628,58	1.313,13	1.054,03
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	638,58	1.323,13	1.064,03
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	48,27	122,87	381,97
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	48,27	122,87	381,97
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	48,27	122,87	381,97
Income (corporate) tax	16,90	43,00	133,69
NET PROFIT	31,38	79,86	248,28

RATIOS

Net present value	at 18,00 %	30,62
Internal rate of return on investment (IRR)	18,68 %	
Modified IRR on investment	7,93 %	
Internal rate of return on equity (IRRE)	19,53 %	
Modified IRRE on equity	8,75 %	

SUMMARY SHEET

Project title:	JV Vinvaldo -(Valdiso,Valdobbiadene- TV)
Project description:	Local partner : Vinvico (Costanza) Romania Foreign partner: Valdo Bolla, Valdiso, Valdobbiadene (TV) Italy
Date and time:	sensitivity: foreign sales decrease 40% (volume)
Project classification:	New project Joint-venture project
Construction phase:	1/1996 - 6/1996
Length:	6 months
Production phase:	7/1996 - 12/2005
Length:	10 periods
Accounting currency:	LEI
Units:	Thousand
Reference currency:	LEI
Exchange rate:	

INVESTMENT COSTS

	Total construction	Total production	Total investment
Total fixed investment costs	1.337,50	99,75	1.437,25
Total pre-production expenditures	0,00	0,00	0,00
Increase in net working capital	0,00	201,06	201,06
TOTAL INVESTMENT COSTS	1.337,50	300,81	1.638,31

SOURCES OF FINANCE

	Total inflow
Equity capital	1.364,25
Long-term loans	240,75
Total short-term loans	124,49
TOTAL SOURCES OF FINANCE	1.729,49

INCOME AND COSTS, OPERATIONS

	First year 7/1996-12/1996	Reference year 2000	Last year 2005
SALES REVENUE	626,05	1.318,00	1.318,00
Factory costs	450,40	940,56	940,56
Administrative overhead costs	0,00	0,00	0,00

SUMMARY SHEET

OPERATING COSTS	450,40	940,56	940,56
Depreciation	133,75	267,50	19,95
Financial costs	0,00	11,56	0,00
TOTAL PRODUCTION COSTS	584,15	1.219,61	960,51
Marketing costs	10,00	10,00	10,00
COSTS OF PRODUCTS	594,15	1.229,61	970,51
Interest on short-term deposits	0,00	0,00	0,00
GROSS PROFIT FROM OPERATIONS	31,90	88,39	347,49
Extraordinary income	0,00	0,00	0,00
Extraordinary loss	0,00	0,00	0,00
Depreciation allowances	0,00	0,00	0,00
GROSS PROFIT	31,90	88,39	347,49
Investment allowances	0,00	0,00	0,00
TAXABLE PROFIT	31,90	88,39	347,49
Income (corporate) tax	11,16	30,94	121,62
NET PROFIT	20,73	57,45	225,87

RATIOS

Net present value	at 18,00 %	-61,14
Internal rate of return on investment (IRR)	16,61 %	
Modified IRR on investment	7,15 %	
Internal rate of return on equity (IRRE)	17,20 %	
Modified IRRE on equity	7,86 %	

United Nations Industrial Development Organization
IPO Industrial Promotion Office

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